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## Reading Faster

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### ABSTRACT

This article describes the visual nature of the reading process as it relates to reading speed. It points out that there is a physical limit on normal reading speed and beyond this limit the reading process will be different from normal reading where almost every word is attended to. The article describes a range of activities for developing reading fluency, and suggests how the development of fluency can become part of a reading programme.

**KEYWORDS:** reading speed; reading processes; reading fluency; activities.

### I. INTRODUCTION

#### I.1. "Are you ready? Go!"

At this command, eighteen heads dip down and the learners begin reading in earnest. At the same time the teacher is pointing to minutes and seconds written on the board, indicating how much time has passed since the learners began reading.

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Minutes	Seconds
0	00
1	10
2	20
3	30
4	40
5	50

As each learner finishes reading the short text, they look up at the board, note down the time it took them to read, and then turn over the text and start answering the ten comprehension questions on the back of the sheet. When they have answered the questions, they get their answer key and mark their own answers. They look at the conversion chart and convert their time into words per minute. They enter their speed in words per minute onto the speed graph and they enter their comprehension score out of ten onto the comprehension graph. The teacher moves around the class looking at graphs and giving comments and encouragement to the learners. The whole activity has taken about seven minutes. The same activity will happen two or three times more in the same week and will continue for a total of around seven weeks until most of the twenty-five texts have been read. This is one lesson in a speed reading course for non-native speakers of English. This article looks at the reasons for having such a course. It then examines a range of ways in which reading speed can be increased and maintained.

### I.2. The nature and limits of reading speed

To see what reading speed goals it is sensible to aim for, we need to understand the physical nature of reading and how this relates to reading speed. There are many misconceptions about reading faster, particularly about how fast people can read, and these can be cleared up by looking at the physical nature of reading. When people read, three types of action are involved - fixations on particular words, jumps (saccades) to the next item to focus on, and regressions (movements back to an item already looked at). This means that while reading the eyes do not move smoothly along a line of print, but jump from one word to another. There has been a great deal of research on eye movements while reading and recent improvements in eye tracking technology have confirmed the following findings (Rayner, 1998):

- 1 A skilled reader reading at around 250-300 words per minute makes around 90 fixations per 100 words. Most words are fixated on, but function words like *the* and *of* are fixated on much less often than content words. The longer the word, the more likely it is to receive a fixation. If a word is really long, it may receive 2 or even 3 fixations. Around 200 milliseconds are spent on each fixation (about 5 per second). The length of these fixations vary a lot depending on how difficult a word or sentence is to read.
- 2 Each saccadic jump is around 1.2 words in English. This is about eight letters. In Finnish, where words are longer, the average jump is 10 letters. This is around the maximum number of letters that can be seen clearly in one fixation. During the jump no items can be focused on because the eyes are moving. A jump takes about 20 milliseconds. The basic unit in the jump is the word and languages with quite different writing systems (for example English and Chinese) all tend to have an average of one jump for every 1.2 words.
- 3 A skilled reader makes around 15 regressions in every 100 fixations. Regressions occur because the reader made too big a jump (many regressions when reading in English are only a few letters long), and because there were problems in understanding the text.

What this research shows is in normal skilled reading most words are focused on. Because there are limits on the minimum time needed to focus on a word and on the size and speed of a jump, it is possible to calculate the physiological limit on reading speed where reading involves fixating on most of the words in the text. This is around 300 words per minute (5 fixations per second times 1.2 = 6 words per second times 60 = 360 words per minute). If regressions are considered, this reduces the forward movement through the text to around 300 wpm). If someone is reading at a speed of 400 words per minute or more, then that person is no longer fixating on most of the words in the text. In Urquhart and Weir's (1998) terms, that person is no longer doing careful reading, but instead is doing "expeditious reading", which includes skimming and scanning. Unless such readers bring a great deal of background knowledge to their reading, they will usually be unable to answer detailed questions on parts of the text not fixated on.

Many non-native speakers of English and some native speakers read at speeds which are well below 300 wpm. About one-quarter of the time in a well-balanced language course should be spent on helping learners become more fluent in using the language they already

know, that is, making the best use of what they have already learned. This fluency development needs to cover the four skills of listening, speaking, reading and writing and needs to involve substantial amounts of input and output.

The physical symptoms of slow reading are (1) fixating on units smaller than a word (word parts, letters, parts of letters) and thus making several fixations per word, (2) spending a long time on each fixation or on some fixations, and (3) making many regressions to look back at what has already been read. Increasing speed will result in a change in these symptoms.

Reading speed is affected by a range of factors including the purpose of the reading, and the difficulty of the text. The difficulty of the text is affected by the vocabulary, grammatical constructions, discourse, and background knowledge. A reasonable goal for second language learners who are reading material that contains no unknown vocabulary or grammar and that has easy content is around 250 words per minute. Let us now look at how learners can be helped reach this reading speed.

### I.3. The nature of fluency development

We have looked briefly at the physical aspects of reading and how these change as fluency develops. But these signs are the result of mental processes. One of the mental processes involved in reading is decoding, that is, turning the written form of a word into a familiar spoken form with a known meaning. Readers develop skill in decoding in two related ways. Through practice they become faster at recognising the unit they are working with, and secondly they change the size of this basic unit. When someone begins to read an unfamiliar written script there are many things to notice. Say for example a Thai speaker is learning to read English. Because Thai uses a different script from English, learning to read the English letters *p b d g* is quite difficult because although the letters have some similarities, there are important differences. Where is the circle part of the letter, at the top or at the bottom, on the left of the stalk or on the right? *p b d* have straight stalks, *g* has a bent stalk. At a very early stage of reading English, each part of a letter is an important piece of information. With practice, fluency in recognising the different letters develops and soon the basic unit that the reader is working with is no longer the parts of the letters but the letters themselves. With further reading experience the basic unit will change from letters to word parts and words. At early stages of word recognition, learners may rely on only some of the letters, usually the initial letters, for word recognition. As they become more accomplished readers, they may no longer need to notice each letter but can recognise whole words and if necessary apply rules

or use analogy to quickly decode unfamiliar words. What this means is that fluency development involves not just becoming faster, it also involves changing the size and nature of the basic unit that the reader is working with. Another way of putting this is to say that fluency develops when complex activities like reading are made less complex by the fluent mastery of some of the subskills involved in the activity.

Research on speaking fluency (Nation, 1989) provides evidence for this. The 4/3/2 speaking activity involves learners working in pairs and one member of the pair speaking on a familiar topic to the other (the listener) for four minutes. Then they change partners. The speaker remains as a speaker and the listener stays as a listener. The speaker now has to give the same talk to the new partner in three minutes. The partners change again and the same talk is given for two minutes. When the two minute and four minute talks are compared, it is typically found that (1) the speed of speaking has increased in terms of words per minute, (2) the number of hesitations has decreased per 100 words, (3) the number of grammatical errors in repeated sections of the talk has decreased, and (4) there are two or three more complex sentences in the two minute talk compared with the four minute talk. For example if in the four minute talk the speaker said "We went to Paraparaumu. Paraparaumu is outside Wellington", in the two minute talk they may say "We went to Paraparaumu which is outside Wellington". Two simple sentences become one complex sentence. Fluency is thus accompanied by improvements in accuracy and complexity (Schmidt, 1992). This is because as parts of the task become more under the control of the speaker, other parts of the task can get better attention.

There are two main paths to fluency. One could be called "the well-beaten path" and the 4/3/2 activity is an example of this. In such activities, repetition of the same material is used to develop fluency. By doing something over and over again you get better at doing it. The second path to fluency could be called A the rich and varied map@. In such activities, the learners do things which differ slightly from each other but which draw on the same kind of knowledge. A good example of this is easy extensive reading where learners read lots of graded readers at the same level. The stories differ but the same vocabulary and grammatical constructions reoccur and the learners develop a rich range of associations with the words and constructions.

#### I.4. The nature of fluency development activities

If an activity is going to contribute effectively to fluency development then it needs to meet certain conditions. Let us look at a very useful fluency development activity for reading

aloud to see what these conditions are.

*Repeated reading* has been used with good results with first language readers to help reach a good degree of oral reading fluency (Samuels 1979, Dowhower 1989, Rasinski 1990, Sindelar, Monda and O'Shea, 1990). The learner reads a text (about 50-300 words long) aloud with help where necessary, while the teacher or another learner listens. Then the text is re-read reasonably soon after (within a day). Then the text is read again a day later. The text should only be a little bit above the learner's present level. Most of the running words should be easily recognised. The optimal number of repetitions is around 3 to 5. Using texts intended to be read aloud, like poems, plays, jokes or stories can increase the purposefulness of the activity. Repeated reading and repeated reading while listening to a taped passage give similar positive results.

The first condition needed for a fluency development activity is that the learners should be focused on the message. In repeated reading this condition is met by having a listener. The reader is trying to communicate the message of the text to the listener. The second condition needed is that the material should be easy. It is important to choose texts for repeated reading where all the vocabulary is known and there are not too many irregularly spelt words. The third condition for a fluency activity is that there should be some pressure to perform at a faster than normal speed. In the repeated reading activity the repetition provides this encouragement. To strengthen this condition, the time taken to read the text could be noted for each reading and the reader should be trying to beat her previous speed for the same text. The fourth and final condition is that there should be quantity of practice. In repeated reading, the text is not very long but the repetitions mean that there is quite a lot of reading practice. To truly be a fluency development activity these four conditions need to be met.

Let us now look at a range of reading activities that meet these conditions and that are thus very useful for developing reading fluency. The activities are divided into three groups which are in order of development. The first group of reading fluency activities involve reading aloud. Such reading is a very important first step towards the second group of activities which involve careful silent reading. The third group involve "expeditious reading", or skimming and scanning very quickly to get a particular piece or a particular type of information. Skill in careful silent reading is an important prerequisite to most skimming and scanning.

## II. INCREASING ORAL READING SPEED

Reading aloud has not been looked on very favourably in the second language reading class mainly because of the misuse of the technique of reading aloud around the class. However, in the first language classroom reading aloud to the teacher or to a peer is a very important step towards gaining fluent decoding and comprehending skills which are a necessary preparation for fluent silent reading. There are several useful activities for working on oral reading and they have just as much value in the second language class as in the first. What all these activities have in common is a learner reading aloud, trying to convey the message of the text to a sympathetic and interested listener. In small classes this may involve a learner reading to the teacher, but in most classes it will involve pair work where a learner reads to a classmate.

### II.1. Repeated reading

We have already looked at repeated reading. A strength of this technique is that it can be used with material that has some difficulties for the reader. By repetition these difficulties are overcome and in the later repetitions the activity can thus meet the conditions needed for fluency development.

### II.2. Paired reading

Paired reading is a form of assisted reading. In this activity, the learner is paired with a more proficient reader. They sit side by side and read the same text aloud together with the more proficient reader keeping at the same speed as the less proficient reader. The less proficient reader nudges the more proficient reader as a signal that she wants to read alone. If the less proficient reader strikes problems, the more proficient reader joins in reading again. Word recognition errors are corrected as soon as they happen, simply by the proficient reader saying the word without further explanation. The same activity can be used with a parent or a cross-age peer. A paired reading activity can last for about fifteen to thirty minutes, and the learners should be trained in the use of the procedure. Research on this activity shows that learners make very substantial progress in accuracy and comprehension. The tutors also make progress in their reading (Rasinski and Hoffman 2003, Topping 1989).

### II.3. 4/3/2 reading

This is an adaptation of the 4/3/2 speaking activity (Nation 1989) for reading aloud.

Each learner has a text to read. All the learners could have the same text but it is more interesting for the listeners and more suitable for a class with a wide range of proficiency if they all have different texts. The learners form pairs. One member of each pair is the listener and the other is the reader. When the teacher says AGo!@ each reader reads their text to their listener. After four minutes the teacher says AStop!@ and the readers stop reading. They change partners and the readers then read the same text for three minutes to their new listener. They change partners again and the readers now read the same text to the new listener for two minutes. The learners are told that they should try to speed up each reading so that each listener hears about the same amount of text even though the time is less. As a variation, after each reading the reader can mark in pencil the place in the text they reached.

#### **II.4. Extensive reading aloud**

A part of the class time can be set aside for learners to read to each other or for one learner to read a continuing story to a small group. The story should be easy to read and the reader can concentrate on making it interesting. A variation could be learners making a tape-recording of a story for others to listen to.

#### **II.5. Read-and look-up**

This activity does not meet many of the conditions for a fluency activity but it is one that encourages learners to work with a larger basic unit. Michael West (1960: 12-13) devised this technique as a way of helping learners to learn from written dialogues and to help them put expression into the dialogues. West regarded the physical aspects of Read-and-look-up as being very important for using the technique properly. The learners work in pairs facing each other. One is the reader, the other is the listener. The reader holds the piece of paper or the book containing the dialogue at about chest level and slightly to the left. This enables the reader to look at the piece of paper and then to look at the listener, moving only her eyes and not having to move her head at all. The reader looks at the piece of paper and tries to remember as long a phrase as possible. The reader can look at the paper for as long as is necessary. Then, when ready, she looks at the listener and says the phrase. While she looks at the paper, she does not speak. While she speaks she does not look at the paper. These rules force the reader to rely on memory. At first the technique is a little difficult to use because the reader has to discover what length of phrase is most comfortable and has to master the rules of the technique. It can also be practised at home in front of a mirror. West saw value in the technique because the learner "has to carry the words of a whole phrase, or perhaps a whole

sentence, in his mind. The connection is not from book to mouth, but from book to brain, and then from brain to mouth. That interval of memory constitutes half the learning process.... Of all methods of learning a language, Read-and-Look-up is, in our opinion, the most valuable" (West, 1960: 12).

Good spoken reading speeds range from 100 to 200 words per minute. These are necessarily slower speeds than silent reading speeds.

Reading aloud is a useful activity to practice accurate decoding and it is a useful activity in its own right - people gain pleasure from listening to stories and talks and from reading stories to others. The activities in this section provide a useful preparation for the silent reading activities described in the next section.

### III. INCREASING CAREFUL SILENT READING SPEED

The classic way of increasing reading speed is to follow a speed reading course consisting of timed readings followed by comprehension measures. For learners of English as a second or foreign language, such courses need to be within a controlled vocabulary so that the learners are not held up by unknown words. The first published course for foreign learners of English was *Reading Faster* by Edward Fry (1967) which had an accompanying teachers' book called *Teaching Faster Reading* (Fry, 1965). The course consisted of texts around 500 words long, each followed by ten multiple-choice questions. The texts were taken from a graded reader and were written at the 2000 word level. The course worked well but it was not suitable for learners with vocabularies of less than 2000 words and it also contained the names of diseases like *kwashiorkor* and *yaws* which tended to slow the reading. Quinn and Nation (1974) developed a course written well within the first 1000 words of English consisting of 25 texts each exactly 550 words long and followed by ten comprehension questions. Other speed reading courses have not used a controlled vocabulary and this has meant that they do not meet the conditions needed for fluency development.

There have been mechanical reading pacers where the text is revealed at a pre-set speed and there have been films which reveal text at a certain rate. Such aids are fun but are not necessary for increasing reading speed. The essential requirements are suitable texts and questions.

#### III.1. Easy extensive reading

Another very effective way of increasing reading speed is to get learners to read graded readers at a level which is much easier than the level they would normally read to gain meaning-focused input. Learners should be encouraged to do large quantities of such reading and to re-read books that they really enjoyed. It is important to remember that there needs to be two types of extensive reading involving graded readers. One type, reading for meaning-focused input, involves learners reading at a level where about one word in 50 is unknown. These words can be guessed from context and add to the readers' vocabulary knowledge. The second type of extensive reading, reading for fluency development, should involve texts where there are virtually no unknown words. Such texts should be read quickly for enjoyment, and large numbers of them should be read.

### **III.2. Silent repeated reading**

In this activity the learners silently re-read texts that they have read before. In order to encourage faster reading they can note the time each reading took so that they have the goal of reading it faster each time.

#### ***III.2.1. Issue logs***

At the beginning of a language course the learners each decide on a topic that they will research each week. Each learner should have a different topic. The topics can include pollution, global warming, oil, traffic accidents, the stock market etc. Each week the learners find newspaper reports, magazine articles, academic texts, information from the internet, television reports etc on their topic and write a brief summary. Because they are reading lots of material on the same topic they will soon be in control of the relevant vocabulary and will bring a lot of background knowledge to what they read (Watson, 2004).

Careful silent reading is the most common kind of reading. Learners need to be able to read with good comprehension near the upper speed limits of such reading.

## **IV. INCREASING SILENT EXPEDITIOUS READING SPEED**

There are two major kinds of expeditious reading - skimming and scanning. The major goal of speeded expeditious reading would be to increase skimming speed. In skimming the reader goes through a text quickly, not noting every word but trying to get the main idea of what the text is about. This is sometimes called getting the gist of the text. After such reading

the reader is unlikely to have noticed details, but should be able to say in a general way what the text is about. The more background knowledge that a reader brings to skimming, the faster the skimming speed is likely to be. Reading speeds higher than 300-400 words per minute are the result of skimming, not careful reading.

#### **IV.1. Skimming**

Being able to skim text is a useful skill, because skimming can be used to help decide if a text or section of a text deserves careful reading. Skimming activities should involve texts which are at least 2000 words long and which are on topics that the learners are familiar with. Comprehension should be measured by questions which ask “What was the text about?”. Multiple-choice or true/false questions which focus on the gist of the text could also be used.

#### **IV.2. Scanning**

Scanning involves searching for a particular piece of information in a text, such as looking for a particular name or a particular number. It is probably better to spend time increasing skimming speed than to devise scanning activities. This is because effective scanning depends on good careful reading and skimming skills, and training in scanning is unlikely to result in more fluent access to items.

Typical scanning tasks include searching a text for a particular quotation, someone's name, a particular date or number, or a particular word; or searching a list for a telephone number, someone's name, or a particular word or phrase.

### **V. FREQUENTLY ASKED QUESTIONS ABOUT READING SPEED**

#### **V.1. What about comprehension?**

Comprehension is very important when developing fluency in reading. There is no point in reading faster if little is understood. For careful silent reading, readers should score seven or eight out of ten on a comprehension test. Higher scores than this indicate that the reader is going too slow and is trying to get too much from the text. It would be easy for the reader to increase their speed. Scores of six or less out of ten are too low and the reader should read subsequent texts at the same speed until comprehension improves. Speed reading courses use both words per minute graphs and comprehension score graphs. Lower comprehension scores are acceptable for skimming tasks because while skimming readers do

not give attention to every part of the text. Questions on skimming texts should look for the main ideas.

### V.2. How can reading fluency be measured?

The typical measure for all kinds of fluency tasks is words per minute (see Lennon 1990 for a wide range of measures for speaking fluency). There has been some debate over whether syllables per minute is a more precise measure, but the difficulty in counting syllables is much greater than any small returns in accuracy it may bring. Moreover, research into eye movements suggests that words not syllables are the primary unit of attention.

### V.3. How can progress in reading fluency be monitored?

#### V.3.1. One minute reading

An interesting activity for regularly checking on reading speed is *One minute reading* (Iwano, 2004). The learners read a text with the time being recorded by a stopwatch. After exactly one minute the teacher says “Stop!”, and the learners mark where they reached in the text. They then count how many words there are up to that point. Doing this on the same text before and after a speed reading program can be a good way of showing learners how their speed has increased.

#### V.3.2. Reading logs

A log is a regular record of what happened at particular times. Learners can keep a log of their extensive reading, noting the name of the book, the time they started reading and how much they read. If this is accurately done, it may provide a rough indicator of reading speed and increases in speed.

#### V.3.3. Speed reading graphs

When learners do a speed reading course with short texts and questions, they score their speed and comprehension on graphs (see Quinn and Nation 1974, page 51). Teachers should regularly look at learners’ graphs and give them advice and encouragement. Where progress is not being made, the teacher can suggest remedial procedures like repeated reading, skimming before reading, and discussion of the content with a friend before reading.

### V.4. What are good reading speeds?

A good oral reading speed is around 150 words per minute. A good careful silent

reading speed is around 250 words per minute. A good skimming speed is around 500 words per minute. These are reasonable goals for foreign and second language learners who are reading material that contains no unknown vocabulary and grammar.

#### V.5. What are the advantages and disadvantages of reading faster?

There are disadvantages of reading faster. The pressure to go faster can be a source of stress. Such pressure can reduce the enjoyment that learners get from reading. It is best to see the skill of reading faster as providing a wider range of choices for a reader. Sometimes it is good to read fast. At other times it is not. Being able to make the choice is an advantage.

Research on reading faster has shown that increasing reading speed in one language can result in increases in another known language. This has been tested from the first language to English (Bismoko and Nation 1974) and from English to the first language (Cramer, 1975; West, 1941). It is likely that the transfer of training here is the transfer of confidence, that is, the confidence that you can read faster and still comprehend.

### VI.CONCLUSION

It has been suggested that reading too slowly at speeds of much less than 100 words per minute can have negative effects on comprehension. Anyone who has learned to read another script knows the phenomenon of slowly sounding out the script and then having to go back and read the sentence again more fluently to see what it means.

Fluency development is an essential strand in a language course. Learners need to be able to make the best use of what they already know at every stage of their learning. Giving attention to reading fluency is one part of this strand. As with the development of listening fluency, speaking fluency and writing fluency, the development of reading fluency can have clear practical and motivational benefits for a language learner.

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