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Are speed-enhancing activities functional and can reading criteria be based on reading comprehension?

1 Subtitle: Does speed matter?

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6 Some results of a PhD study

1

Good afternoon,
Welcome, and I am honored that you will follow my presentation and that you stayed until the end

The title of my presentation is:
Are speed-enhancing activities functional and can reading criteria be based on reading comprehension?

The subtitle is: Does speed matter?

My name is Luc Koning and I am going to present some results from my PhD study

2

Introduction

1 Reading instruction is usually aimed at learning to read as quickly as possible (Koning, 2024)

2

In general the goal of reading education is to teach students to read as quickly as possible. In other words reading at high speed/ (Koning, 2024)

Of the 20 reading courses used in the Netherlands to teach children to decode, 75% of those reading courses encourage children to read faster than they can.

This is not only the case in the Netherlands but also in international literature.

3

Read the words carefully and smoothly with the hourglass.
Draw a line where you've come. (1/2 minute)

1	tuinproeier	stadion	stofzuigerslang	dieren
	waterdruppel	thuisreis	ontdoelen	zwingend
	hinderen	kanarie	limoen	nieuwsleeswijze
	overmoed	tenniseedstrijd	theslagje	wandelen
	flat	potloodje	aangekleed	verkeersdrempel
	informatie	zeeeeuw	bezempje	programma
	drumsolo	klimaat	opnieuw	wolijk
	schuur	verbeteren	ziekenhuisbed	diamant
	overstromen	buiging	baby	hoorkoorts
	duizend	onderzoeken	memoblok	twijfelen

130 of these exercises every
five months in grades 2-4
(even for the A-readers)

2 Now practice the rows a few times, then read
carefully and smoothly with the hourglass. Always
draw a line to where you have come.

3.

In many decoding methods, you will encounter the following types of exercises

Read the words carefully and smoothly with the hourglass. Draw a line where you've come.

Then 40 words follow and the children are allowed to read for half a minute. It is only about reading the words and not about the meaning of the words. After reading it for the first time, the assignment follows.

Practice the rows a few times, then read carefully and smoothly with the hourglass. Always draw a line back to where you have come.

Children do this type of exercise 130 times in 5 months in grades 2 to 4. Even the A-readers still do 80 of these exercises,

No one wonders whether it might be fast enough the first or second time.

4

Does speed matter?

What happens when you offer a curriculum without any speedreading?

4.

The research question I asked is what happens when you follow a curriculum in which children are not encouraged to read quickly.

Does speed matter?


- 1 Q.1 Is education in which students are encouraged to read as quickly as possible necessary for reading **fluency**?
- 2 Q.2 Is reading as fast as possible necessary for reading **comprehension**?

5
 2 of the research questions I asked are

The self-reliant reading format
An educational format




6.
A self-reliant reading format has been developed for educational practice.
 That is an educational format.
 The infographic looks like this:



1 Some features of the format of The self-reliant reading format:

- 2 • **no** incentive to read quickly
- 3 • **attention to raising awareness to read quietly** with a poster as an aid
- 6 • attention to **vocabulary**
- 7 • attention to **visualization**
- 8 • attention to **prosody**



4

5 don't race while reading but read all the words calmly and carefully

7

No educational incentives to read quickly.


Emphasis on awareness to read quietly with a poster as an aid.

The teacher points the children to the poster.

Attention to vocabulary (do not read words whose meaning you do not know)

Visualizing what is being read.

Attention to prosody.



1

2 no instructions to read quickly during a test

8.

When taking the reading test, the child is instructed to read accurately, but not instructed to read quickly or fast.

Methods

- 1 N=1200
- 2 8 measuring points M1-E1, M2-E2, M3-E3, M4-E4
- 3 the same group of students was followed
- 4 Two reading tests (word tests), reading comprehension tests (CITO),
- 5 questionnaires
- 6 Test A (DMT) **no** instruction to read quickly: 8 times
- 7
- 8
- 9
- 10 3 test cards, 1 minute per card
- 11
- 12 Test B (EMT) instruction to read **quickly**: 7 times
- 13

9.

Approximately **1,200 children participated in the study**. There were 8 benchmarks at which the children were examined. That happened in middle grade 1, end grade 1, middle grade 2, etc.

The project started in 2018 and ended in 2022. Almost the same group of children was followed in all these years.

At the assessment moments, reading tests were administered and questionnaires were presented to the children and teachers.

A three-minute test was used. The children were not given any instruction to read quickly.

The test contains three reading **cards in a progression of levels**, starting with monosyllabic words such as moon. Card 2 contains **monosyllabic** words with more **consonants** such as strong and the last card contains **multisyllabic words**.

The children must always read each card for 1 minute.

In addition, a one-minute test was also administered. During that test, the children were told that they did not have to read quickly in class, but that they were being tested to see whether they can read quickly. **That went against the principles of self-reliance reading**. I will soon explain why the test was administered in that way.

Results

- 1 **Q.1** Q.1 Is education in which students are encouraged to read as quickly as possible necessary for reading fluency?

10.

I would like to start by presenting the research results regarding research question 1.

1 Overview one-sample t-test EMT reference group and self-reliance readers

2 Moment	3 M. Reference group	M. Self-reliant group	t	df	Two side p	Mean difference	5 Yes/no significant
E1	27,5	27,4	-.148	825	,882	-.1	no
M2	38,6	40,7	3,627	683	<,001	2,0	yes
E2	45,6	48,0	4,407	737	<,001	2,2	yes
M3	52,8	55,3	4,482	669	<,001	2,5	yes
E3	57,7	57,4	-.600	590	,549	-.4	no
M4	63,6	62,9	-.661	601	,509	-.4	no
E4	66,7	65,1	-2,634	558	,009	-1,6	no

11.

To determine whether the activities in the context of promoting fast reading are useful, the differences were examined between the self-reliance readers and the reference group of children who participated in the reading test standards.

Both groups of children were instructed to read accurately, but also quickly.

At the end of grade 1, the difference between the reference group and the self-reliant group is very small and therefore not significant.

In middle grade 2 end grade 2 and middle grade 3, the self-reliance readers themselves score significantly better

- 1 • Children can therefore read quickly without education aimed at speed reading
- 2 • Speed-oriented reading instruction is not necessary
- repeatedly reading words, sentence types and texts without an hourglass or stopwatch are useful for accurate reading

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The following conclusions can be drawn:

Children can read quickly (when asked) even without having received education in which reading quickly has been practiced.

This means that the hourglass or stopwatch exercises can be omitted. The time that is freed up can be better spent on reading comprehension or reading experience.

Repeated reading of words, sentence types, and texts without a stopwatch or hour-glass can be useful for stimulating reading development.

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Does speed matter?

- **Q2.** Is speed orientated reading necessary for reading comprehension?

13.

Question 2 concerns the question of whether being able to read quickly is necessary for text comprehension

In other words: is it necessary for children to be able to read quickly?

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Three aspects

- Correlation between decoding and comprehension
- Interpretation of the correlation coefficients
- the minimum speed required to not hinder text comprehension?

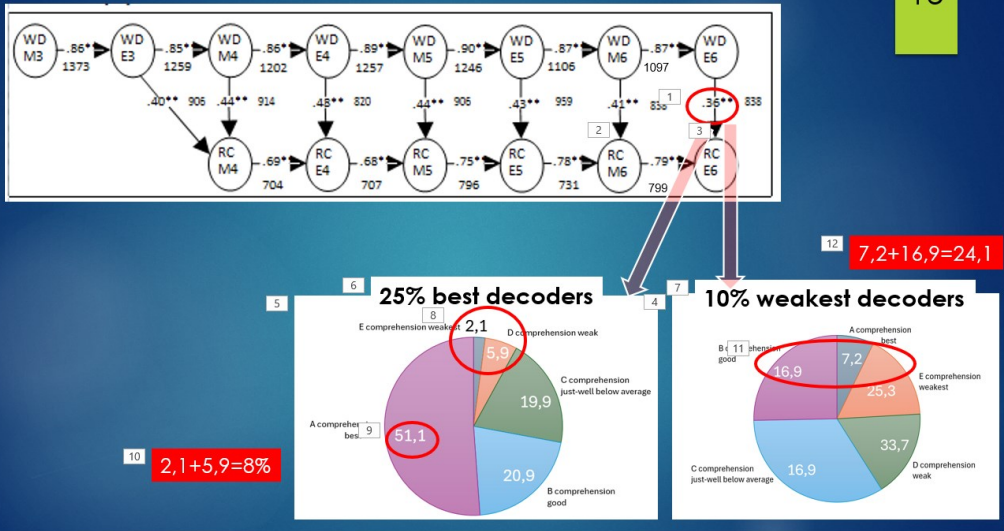
14.

I am going to address three aspects of the answer to question 2, namely:

The correlation between decoding and text comprehension

The interpretation of the found correlation coefficients

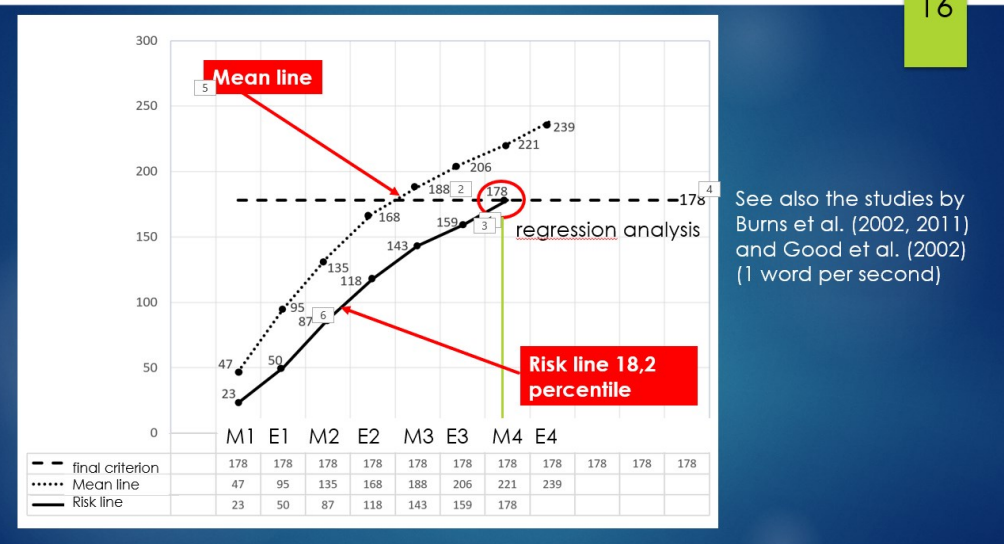
The question is what minimum reading speed is necessary so that text comprehension is not hindered.



15.

This overview shows the correlation coefficients. That ranges from .44 to .36. That coherence is weak.

The question is what, for example, a correlation coefficient of .36 means at the end of grade 6. Prevalence matrices have been created for all correlations. I will give two examples, namely for the 25% best decoders and the 10% weakest decoders. It then turns out that a correlation coefficient of .36 means that 51.1% of the best decoders are also the best comprehension readers, but 48.9% are not, and that 8% of the best decoders are among the weakest performers in comprehension read. For the 10% weakest decoders, a correlation coefficient of .36 means that 24.1% of those weakest decoders are among the best comprehension readers.



16.

Based on regression analysis, the minimum reading speed was determined so that reading comprehension is not hindered. For middle grade 4 it is known what the basic performance should be for reading comprehension and on this basis, the reading speed was determined at a score of 178 words on the three tests. That's about 1 word per second. See also Burns and Good (2002 and 2011).

This line shows the average performance for decoding. The score of 178 middle grade 4 includes a percentile of 18.2 and a risk line has been constructed on that basis. If children reach or fall below that level, there is a chance that they will not reach the final criterion on time and special reading guidance must be offered.

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% children that meets the criterion of 178

% children that meets the criterion of 178

M4
N=1114

81,9

% children that meet the criterion of 178

	M1 N=1393	E1 N=1375	M2 N=1267	E2 N=1205	M3 N=1163	E3 N=1161	M4 N=1114	E4 N=1110
% children that meet the criterion of 178	0,14	4,9	23,3	44,5	57,6	72,7	81,9	89,6

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This overview shows that 81.9% of the children achieve the final criterion of 178 in mid-grade 4 and that at the end of grade 4 this is almost 90%. From grade 1 onwards you can see how many children achieve the final criterion.

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Q2. Is speed orientated reading necessary for reading comprehension ?

- No, but there is a minimum reading speed required (1 word per second)
A reading speed of 1 word per second is sufficient for text comprehension

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Now the question can be answered whether speed-oriented reading is necessary. That is not necessary (see Q.1), but a minimum speed is required.

Discussion

- 1 • The total score on the three test cards is not decisive
- 2 • You always need the number of words read incorrectly and the words per card (= per word type)

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The total score on a test consisting of three cards is not decisive about the assessment of reading performance.

It is necessary to also assess the score per card and the number of words read incorrectly.

	M1	E1	M2	E2	M3	E3	M4	E4
Card 1 minimal	15	24	39	51	59	64	71	69
Card 2 Minimal	8	17	30	42	50	55	62	61
Card 3 minimal	does not apply	9	18	25	34	40	45	48
Final standard	23	50	87	118	143	159	178	178

	M1	E1	M2	E2	M3	E3	M4	E4
Card 1 maximum number of errors	3	3	3	2	2	1	2	1
Card 2 maximum number of errors	3	3	3	3	2	2	2	1
Card 3 maximum number of errors	does not apply	4	5	4	4	3	2	2

20.

There are also criteria for the minimum score children must score per card.

And also available are the maximum errors that children are allowed to read.

Discussion

1 Advantages

- 2 • It saves time to spend on acquiring text comprehension or experiential reading
- 3 • It reduces stress
- 4 • Finally some guidance on what is sufficiently fast

5 Further research

- 6 • Problems with decoding ease probably distract children more from the content of the text
- 7 • It is recommended to conduct this research for other languages

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The advantages of self-reliance reading are that fewer speed exercises need to be done and that time can be better spent on teaching reading comprehension or experiential reading.

According to the teachers, this approach provides more relaxation for themselves and the children.

Everyone talks about the fact that children should be able to read sufficiently fluently and now we know what sufficient fluency is.

It is probably the case that ease of decoding is more important than a high reading speed. Sometimes the processing of the content is seriously hampered by spelling reading, guessing reading, staring reading (staring at a word without doing anything, and self-correcting reading).

It is also recommended to repeat this study for other languages.



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Thank you for your attention.