

# RELATIONSHIP BETWEEN READING SPEED, DISCRIMINATION OF PROSODIAL MODELS, PHONOLOGICAL AWARENESS AND SPEED OF NAMING

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# ***INTRODUCTION TO THE PROBLEM***

**Speed of Reading**

**Phonological awareness**

**Rapid automatic naming**

**Prosodial sensitivity**



# Speed of Reading

- Reading speed are used because it is calculated **relatively easily and quickly**.
- Speed of reading is discussed as a **component of reading fluency**.
- Meyer & Felton (1998) - "the ability to read connected text rapidly, smoothly, effortlessly, and automatically with little deliberate attention to the art of reading".
- **Not clear theoretical consensus**
  - definitions of mastery of reading that **focuses on speed and accuracy** (Logan, 1997; Sheen & All, 1992)
  - this definitions " ignore the multidimensionality of the concept of "fluency" of reading "(Wolf et all, 2001)

# Phonological awareness

- **generalized term** labelling all levels of knowledge of the sound elements;
- If **phonological images are poor** (holistic) the development of **literacy and spelling is difficult** (Vellutino, 2004)
- **Study:**
  - people with dyslexia have **poorer phonological memory** (de Bree, Rispens & Gerrits, 2007)
  - **poor categorial perception and phonological awareness** (Joanisse, 2000).
- the phonological awareness can be **developed through carefully planned training** (O'Connor, 1993).

# Rapid automatic naming

- complex integration of the cognitive and linguistic processes;
- requires naming the colours, objects, numbers and letters;
- The ability to quickly naming is related to reading, as these two skills are related largely to the ability to phonological processes (Chard, Dickson, 1999).



# Prosodial sensitivity

➤ **Babies bonding mimics the prosodial characteristics of the speech (Kuhn & Stahl, 2003).**

➤ Research on **premature babies** (Mahmoudzadeha et All, 2012) - **listening to syllables cause increased brain activity in the left hemisphere; discriminatory respond of a phoneme and voice** (male or female) even in the smallest infants (gestational age - 29 weeks).

**This results demonstrate the complex organization of perisylvia area in fetal development and emphasize the influence of hereditary factors in language processing and social communication in humans.**

➤ Wood & Terrell found that 8-year-old poor readers encounter greater **difficulty in tasks of combining rhythm patterns.**

# ***METHODOLOGY***

**The aim** is to establish the **relationships between speed reading, phonological awareness, prosodic sensitivity patterns and speed of naming.**

**The hypothesis - the sensitivity of children to suprasegmental characteristics of speech may indicate their later skills in phonological awareness, and, thus, to the reading process.**

**Subjects:**

**25 children from first grade from Sofia, Bulgaria.**

**Children are without disturbances in sensory modalities and intellect is normal.**

# *Description of the test battery*

## **16 tests include:**

- **five types of tasks:** rhyme, sound categorization, blending, segmenting, and manipulation;
- **two response method** - „recognition” and „production”;
- **sound representation** – oral representation and picture representation;
- **linguistic unit** - word, syllable, onset-rime, phoneme;
- **phoneme position** - beginning, middle, end;

**2 tests** - Rapid serial naming  
\*colours and objects

Picture test of phonological awareness / PTPO /





# Test for discrimination prosodial models

Stimuli presented to the **compact audio CD** is composed of **40 pairs of alternately repeating syllables** by changing the number of syllables (2 to 5), e.g., "ma MA" or "MA ma ma ma ma".

The children have to say that the elements are **"the same" or "different"**.

Total possible **score on this test is 40 points**.

## ➤ Research on reading speed:

For the first grade (Bulgarian norm)- reading speed at the end of the school year - 30-40 words per minute.

## ➤ Procedure:

At the beginning of the school year children were tested with the PTPA.

Children performed tasks in two sessions between 20 and 30 minutes.

At the end of the academic year the reading speed was researched.

A statistical processing program -SPSS 15.0 .

# RESULTS AND DISCUSSION

INDICATORS	STATISTICS	PHONOLOGICAL AWARENESS
SPEED OF READING	Correlation coefficient (r)	,631**
	Significance (p)	,001

**There is a statistically significant positive correlation** between the results of the reading speed and phonological awareness, i.e. the higher score for phonological awareness, the more words per minute can read.

# RESULTS AND DISCUSSION

INDICATORS	STATISTICS	RAPID NAMING
<b>SPEED OF READING</b>	Correlation coefficient (r)	<b>-,494*</b>
	Significance (p)	<b>,012</b>

**There is also a moderate negative statistical correlation between the reading speed and rapid naming, i.e. more reduces the time to refer to the rapid naming test, the more words a minute the child can read.**

# RESULTS AND DISCUSSION

INDICATORS	STATISTICS	PROSODIAL DISCRIMINATION
<b>SPEED OF READING</b>	Correlation coefficient (r)	<b>,482*</b>
	Significance (p)	<b>,015</b>

**This study confirms that the ability of discrimination prosodial models is significantly correlated with reading. The correlation between reading speed and discrimination prosodial models is moderate.**

# CONCLUSION

The present study demonstrates the **importance of phonological awareness and rapid naming of subsequent success in the mastery of reading** and preventing children from spiraling movement of violations, ranging from the deficit in the spoken language in the process of literacy.

Data from this study also support the idea that **the ability of discrimination prosodial patterns in children may suggest their later ability to phonological awareness and reading.**

# Thank you!

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