

## ABSTRACT

The aim of this study is to determine whether naming speed predicts word reading accuracy at the beginning of primary education. The sample consists of a group of 120 students of Elementary Education, 65 boys and 55 girls, between 6 and 7 years ( $M= 79.79$  months;  $SD= 3.44$ ). The accuracy in reading words and speed of naming colors, pictures, letters and numbers were evaluated. The results of the regression analysis shows that 13% of the variance in reading accuracy is explained by the speed of naming colors, images, numbers and letters. Naming speed is a good predictor of reading accuracy even at the beginning of compulsory education.

## OBJECTIVE

In last decades, the study of the relationship of phonological variables with reading has been a topic of great interest. Recently, studies in the literature linking the RAN with reading speed and reading accuracy at an early age in different transparent languages. Naming speed is the ability to name quickly familiar stimuli as letters, digits, numbers and colors (Wolf & Bowers, 1999) and assesses the speed and automation of cognitive processing. The RAN (Rapid Automatized Naming) is a cognitive task related to sublexical reading processes and it is related with reading accuracy of words, at early ages (Aguilar, Navarro, Menacho, Alcalá Marchena and Ramiro, 2009; González, 2012), specifically, with speed of naming colors and objects (Bowey, McGuigan, and Ruschena, 2005; Wolf, Bally, and Morris, 1986). The objective of this study is to analyze the predictive nature of naming speed in the reading accuracy of words in Spanish at the beginning of primary education, particularly at age six.

## METHOD

### PARTICIPANTS

- 120 students of Elementary Education
- 65 boys and 55 girls,
- Between 6 and 7 years ( $M= 79.79$  months;  $SD= 3.44$ ).
- The socio-cultural level is medium-low
- Excluded: Students with learning disabilities, cognitive, emotional or sensory handicaps and with foreign origin with low linguistic status.

### INSTRUMENTS

VARIABLE	INSTRUMENTS	COMPONENTS
Reading accuracy	TEST OF READING AND WRITING LEE (Defior et al, 2006)	Reading Precision • words
Naming speed	BATTERY RAPID NAMING (Gomez-Velazquez, Gonzalez-Garrido, Zarabozo and Amano, 2010)	Naming Speed • colors • images • numbers • letters

## PROCEDURE

- The design of this study is cross-sectional.
- The reading accuracy of words and naming speed was individually assessed in the school of children.
- The correction of tests and the data processing were done by psychologists of the research group.

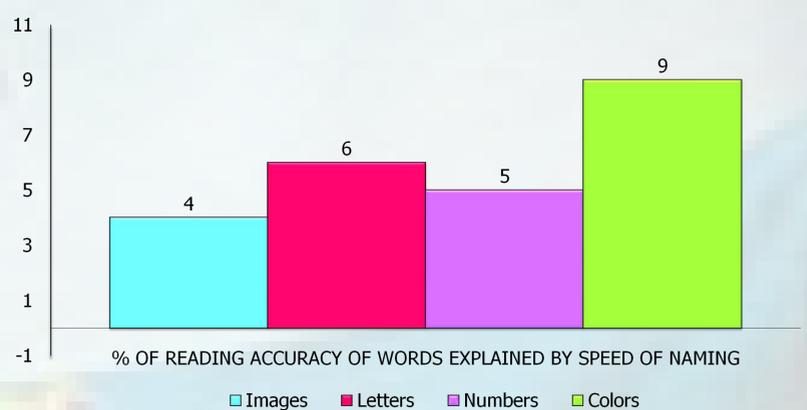
## RESULTS

The results of the multiple regression analysis are significant ( $F_{(4, 116)} = 5.32$   $p < .005$ ) and show that 13% of the variance in reading accuracy of words is explained by the speed of naming colors, images, numbers and letters.

	R	R <sup>2</sup>	F	B	$\beta$	t
Images	.232	.04	6.596	-.095	-.232	-2.56
Letters	.270	.06	9.271	-.307	-.270	-3.04**
Numbers	.245	.05	7,504	-.435	-.245	-2.73*
Colors	.320	.09	13,365	-.202	-.320	-3.65**

\*\* $p < .005$ ; \* $p < .01$ ;

The results of the simple regression showed the speed of naming colors and letters are the components that explain better the reading accuracy of words at this age, by 9 and 6%, respectively ( $F_{(1, 118)} = 13.36$  y  $F_{(1, 119)} = 9.27$ ,  $p < .005$ ).



## DISCUSSION

- The results show that RAN predicts reading accuracy of words at the beginning of the compulsory education.
- The naming speed of letters and colors are the factor that explain it better.
- These results support other studies that link closely the RAN with reading accuracy (Aguilar et al., 2012; Cardoso-Martín and Pennington, 2004; Georgiou and Parrila, 2006; Kirby, Georgiou, Martinussen and Parrila, 2010).
- RAN is important in the prevention and intervention of learning disabilities at an early age and in transparent languages, such as Spanish.
- In futures studies, we want to analyze the influence of the RAN in the reading accuracy of pseudowords and in the second years of compulsory education.

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