Screening Portuguese students at risk for dyslexia with curriculum-based measurement-Maze

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Rationality: In Portugal the field of **Specific Learning Disabilities** is **characterized** by a **lack of a technically adequate system of school-wide screening** and progress monitoring (Martins, 2006). Emphasis on the need of this system has increased as a result of national research (i.e., Mourão, 2011; Patrão, 2010) within the context of a **Multi-level Prevention System.** Additionally, Portuguese educational theorists who teach, research, conduct clinics, and write about specific learning disabilities, also documented this need (Martins, 2006).

Purpose: This poster aims to analyze the use of progress measurement in reading as a universal school screening system for students at risk of developing Dyslexia in the third and forth years grade of primary school. Was carried out in the context of the first level of a Response to Intervention Model. We highlight the course of the students considered at risk in the different monitoring carried out with CBM–Maze probe.

Screening

Three times a year. Data collection took place in each classroom measuring (autumn, winter, spring)
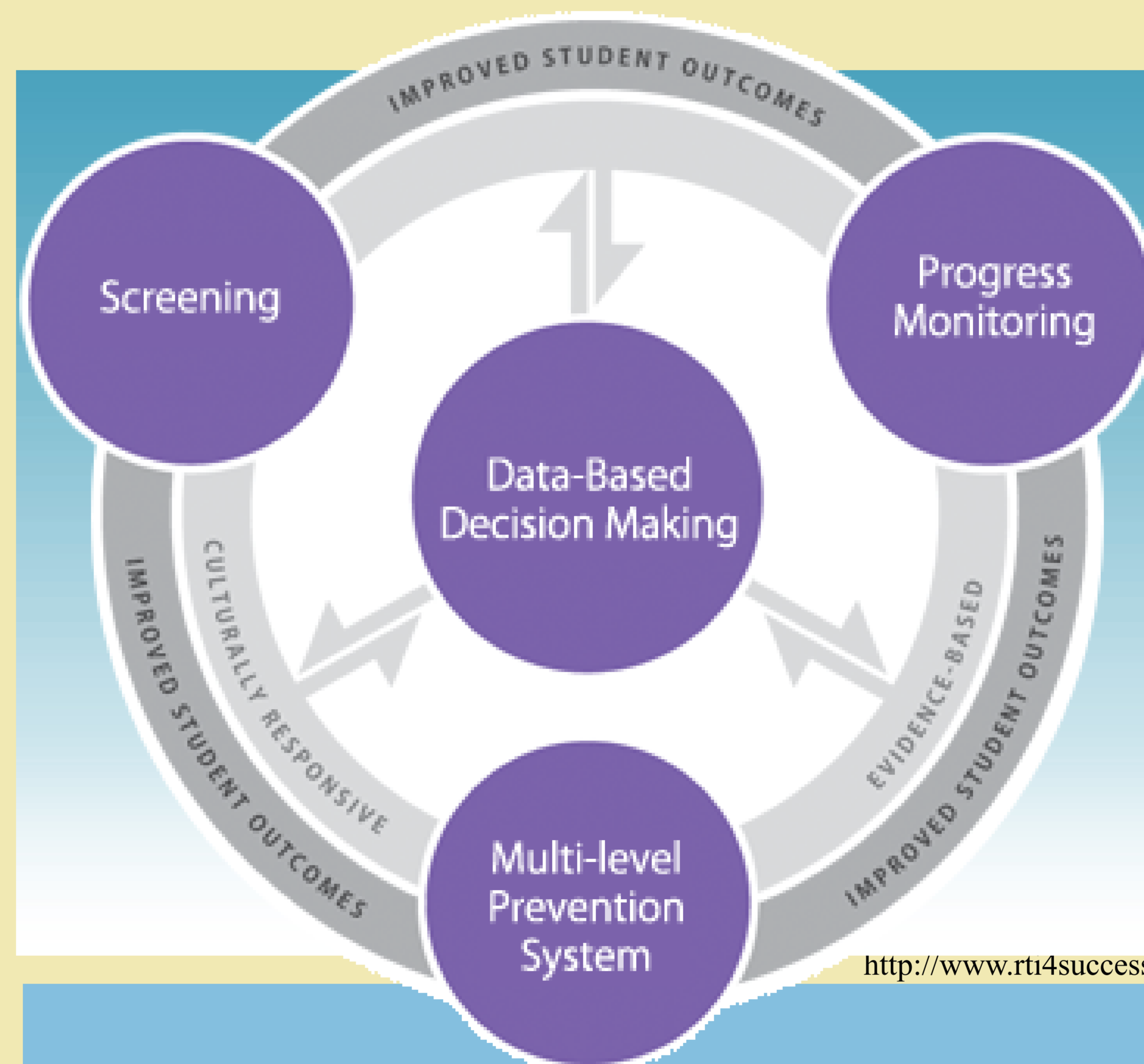**Sample: 82 Students** from a School Cluster in the north of Portugal.
Instruments: Data was collected using a **CBM Maze probe**
Data was analyzed by descriptive and inferential statistics.

Tier III
Tertiary Prevention

Tier II
Secondary Prevention
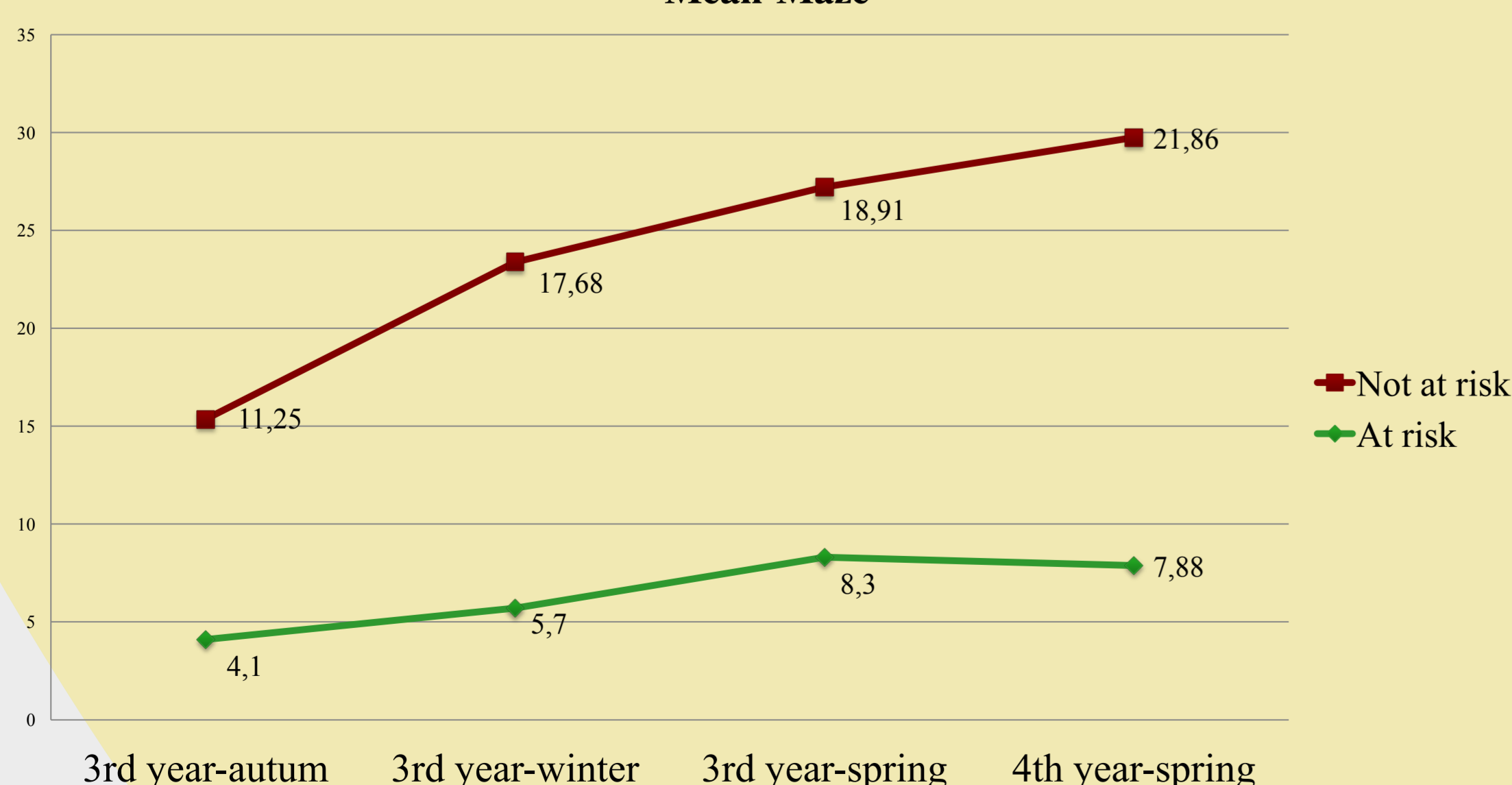
Tier I
Primary Prevention

Conclusions:
1) Ten students were considered at reading risk throughout the whole school year;
2) At the end of the fourth year eight students remain at risk;

Data-Based Decision Making

Students with **scores below 20th percentile** were the ones who were **considered at risk**.

http://www.rti4success.org/

Includes three levels of intensity or prevention:
Primary: high quality core instruction;
Secondary: evidence-based intervention(s) of moderate intensity;
Tertiary: individualized intervention(s) of increased intensity for students who show minimal response to secondary prevention.

Progress Monitoring

To assess students' reading performance, we used a three minute **MAZE probe** (Deno, 1985). The Maze probe requires students to silently read text passages. Every 7th word is deleted and replaced with three word choices. Students select the correct word for each set of word choices. (Deno, Reschly, Lembke et al., 2009, p. 46; Fuchs & Fuchs, 2008).
CBM Maze probe **is economic, quick and easy** to implement, with good acceptance and high levels of acceptance among teachers and students (Vaz, 2015).

References:
Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children, 52(3), 219 – 232.*
Deno, S. L., Reschly, A. L., Lembke, E. S., Magnusson, D., Callender, S. A., Windram, H., et al. (2009). Developing a School-wide Progress Monitoring System. Psychology in the Schools, 46 (1), 44-55.
Fuchs, L.S., & Fuchs, D. (2008). The role of assessment within the rti framework. In D. Fuchs, L. S. Fuchs & S. Vaughn (Eds.), Response to intervention: A framework for reading educators (pp. 27-49). Newark: International reading association.
Martins, A.P.L. (2006). Dificuldades de aprendizagem: Compreender o fenómeno a partir de sete estudos de caso. Instituto de Estudos da Criança, Universidade do Minho, Braga.
Mourão, D. (2011). Dificuldades de Aprendizagem Específicas na Leitura: Um Estudo Quantitativo sobre a Monitorização com Base no Currículo. Tese de Mestrado não publicada em Educação Especial, Especialização em Dificuldades de Aprendizagem Específicas Instituto de Educação, Universidade do Minho, Braga.
Vaz, P. M. F. (2015). Triagem universal de alunos em risco de apresentarem dificuldades de aprendizagem específicas na leitura: um estudo quantitativo no 3.º ano do 1.º ciclo do ensino básico. PhD Thesis. University of Minho, Braga-Portugal.

3) At the end of the **3rd year** and the **4th year**, the mean results from students who were never at risk was significantly higher **(M=18.91**; DP=4.732 and **M=21.86**; DP=5.303) than the mean results from those of students who have been at risk (**M=8.30**; DP=1.703 and **M= 7.88**; DP=3.682);

4) The weekly growth throughout the 3rd year of students who were never at risk was significantly higher (.32) than the growth rate of students who were at risk throughout the whole year (.18).

Mean-Maze

- Not at risk
- At risk

3rd year-autum — 3rd year-winter — 3rd year-spring — 4th year-spring

Students	Growth rate
At risk	.18
Not at risk	.32

In the future it is necessary **to implement intervention programs at the secondary and tertiary levels** as recommended by the research within the Response to Intervention model.

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