



Data:  
17 de março de 2023

**Formadora:**  
Prof.<sup>a</sup> Dr.<sup>a</sup> Simone Aparecida  
Capellini



**WEBINAR**

**Disortografia e Disgrafia: identificação precoce, diagnóstico e intervenção**

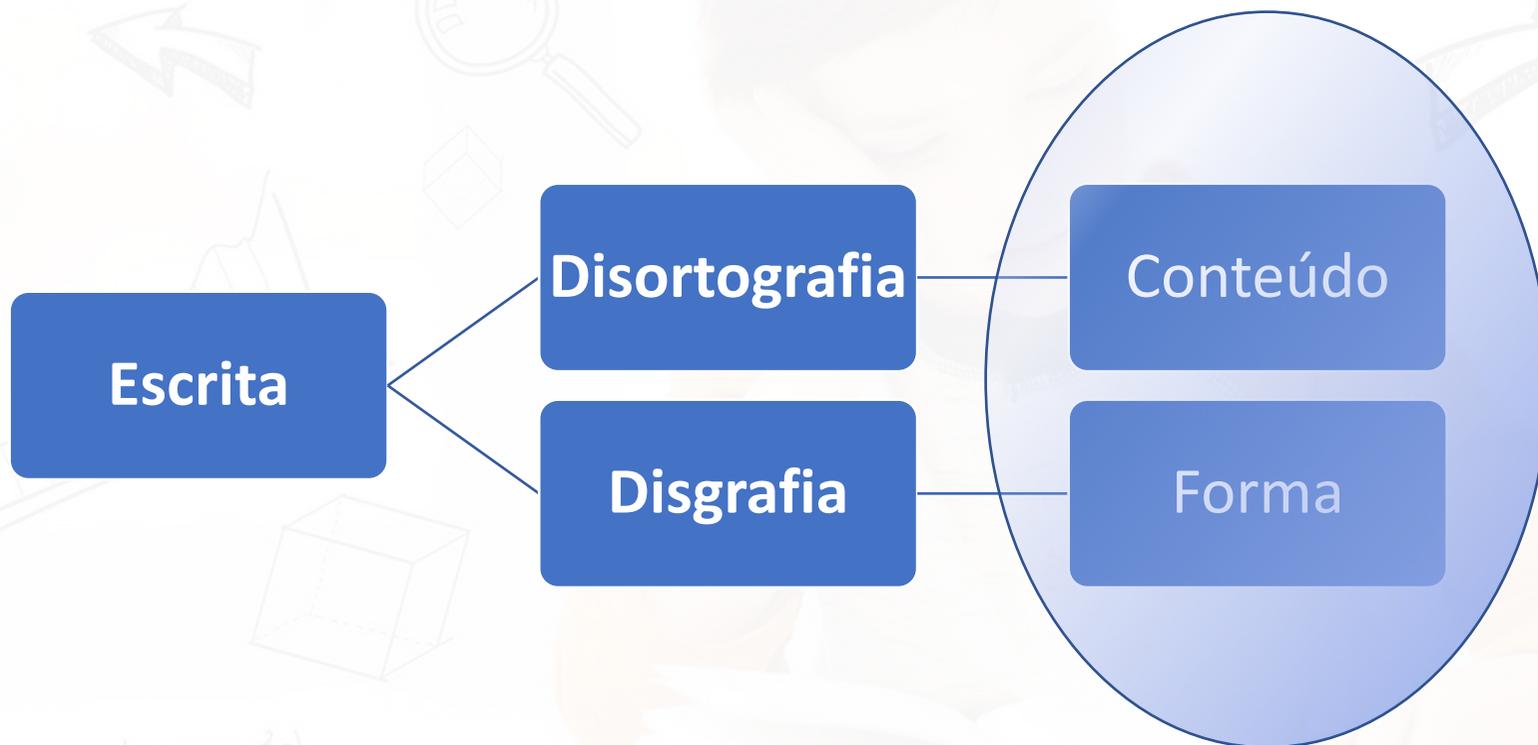


## Temário

- Qual a diferença entre a Disortografia e a Disgrafia?
- Porque é necessário utilizar instrumentos específicos para a avaliação da escrita orográfica e a escrita caligráfica?
- Princípios interventivos para a escrita ortográfica e escrita caligráfica.



# Qual a diferença entre Disortografia e Disgrafia?



**Memória Lexical Ortográfica**  
**Mapa Mental/lexical Ortográfico**

# DISORTOGRAFIA

- Escrita marcada por erros ortográficos e substituições de grafemas surdos por sonoros,
- Alteração na planificação da linguagem escrita, que causa transtornos na aprendizagem da ortografia, gramática e redação,
- Algumas destas características fazem parte do processo de apropriação do sistema ortográfico da língua – fase de aquisição da escrita,
- Alterações persistentes - Transtorno específico de leitura.



ZORZI (1998), MOUSINHO (2003), MORAES (2003) e CAPELLINI et al. (2004)

# DISORTOGRAFIA

Transtorno de aprendizagem específico com prejuízo na expressão escrita, sendo codificado como 315.2 (F81.81) especificando-se o item Precisão na Ortografia (DSM-5, 2014).

***Não elucida os tipos de erros ortográficos***



# DISGRAFIA

A **Disgrafia** é conceituada como um **“Distúrbio de aprendizagem específico com deficiência na expressão escrita”** (DSM-IV, 1995).

- ▶ dificuldade em relação à expressão escrita, com persistência de 6 meses no mínimo, apesar das sessões de intervenção.
- ▶ um desempenho na habilidade escrita inferior ao esperado para a idade cronológica (legibilidade e velocidade),
- ▶ dificuldades no desempenho escolar ou profissional e nas atividades da vida diária,
- ▶ confirmar, por meio de avaliação clínica completa e medidas de desempenhos padronizados.



# DISLEXIA

- a) Leitura de palavras feita de forma imprecisa ou lenta, demandando muito esforço. A criança pode, por exemplo, ler palavras isoladas em voz alta de forma incorreta (ou lenta e hesitante); frequentemente tenta adivinhar as palavras e tem dificuldade para soletrá-las;
- b) Dificuldade para compreender o sentido do que é lido. Pode realizar leitura com precisão, porém não compreende a sequência, as relações, as inferências ou os sentidos mais profundos do que é lido;
- c) Dificuldade na ortografia, sendo identificado, por exemplo, adição, omissão ou substituição de vogais e/ou consoantes;
- d) ***Dificuldade com a expressão escrita, podendo ser identificados múltiplos erros de gramática ou pontuação nas frases; emprego ou organização inadequada de parágrafos; expressão escrita das ideias sem clareza.***

**Persistência da dificuldade por pelo menos 6 meses (apesar de intervenção diagnóstica – Modelo de Resposta à Intervenção RTI)**

(DSM-V, 2014)



# DIAGNÓSTICO

Nunca antes dos 8 anos, 11 meses e 29 dias

Ter recebido instruções para aquisição e prática da escrita



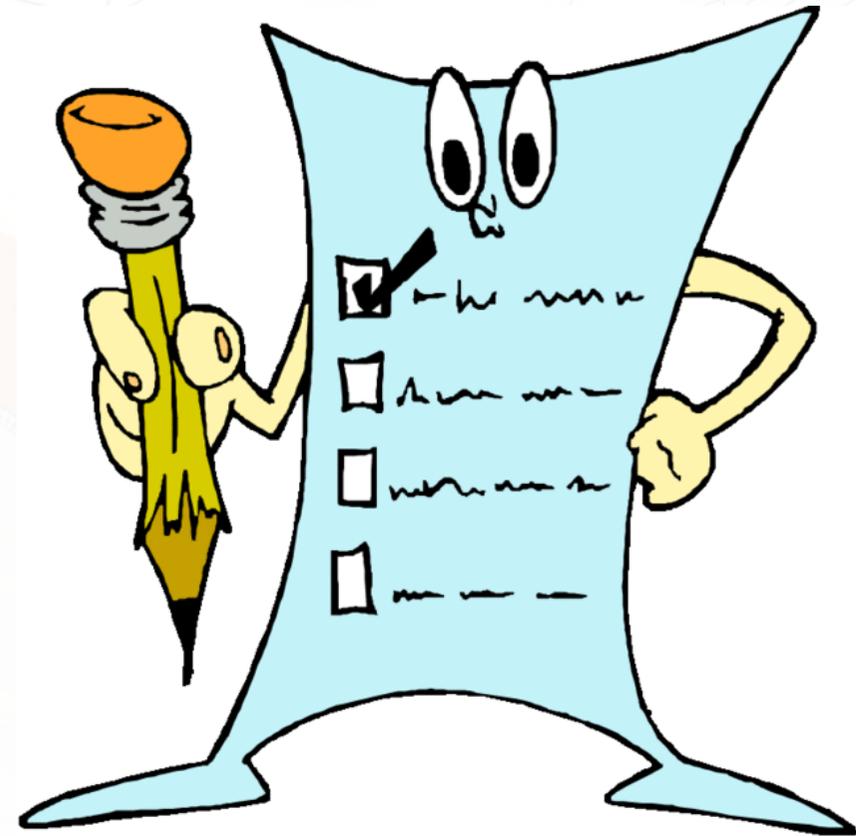
(Rosenblum, Aloni & Josman, 2010; Batista & Capellini, 2011)



Snowling (2004); Capellini (2005, 2006); Capellini, Ávila (2007); Herrero; Capellini (2017)

# Porque é necessário utilizar instrumentos específicos para a avaliação da escrita orográfica e a escrita caligráfica?

- Objetivos diferentes de avaliação,
- Instruções diferentes,
- Tipos de textos diferentes para análise,
- Acessórios de escrita diferentes



# ESCRITA ORTOGRÁFICA

CONHECIMENTO  
DO ALFABETO

DITADO

USO DE BORRACHA  
NÃO É PERMITIDO

# ESCRITA CALIGRÁFICA

CÓPIA

USO DE BORRACHA  
É PERMITIDO

# DISORTOGRAFIA

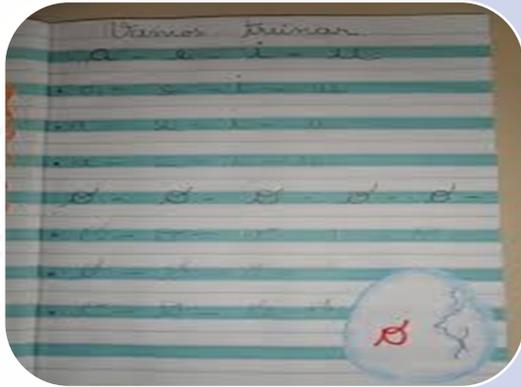
Erros de Ortografia  
Natural

Erros de Ortografia  
Arbitrária –  
Dependentes de  
Contexto

Erros de Ortografia  
Arbitrária –  
Independentes de  
Regra

Batista & Capellini (2011)

# DISGRAFIA



# DISGRAFIA



1		
2		
3		
X		
1		
2		
3		
X		

A **linha 1** para as hastes e laços ascendentes.

A **linha 2** representa a linha onde a criança deve escrever.

A **linha 3** para as hastes e laços descendentes.

 O escolar não deve escrever nada na linha marcada com o **X**.

1

2

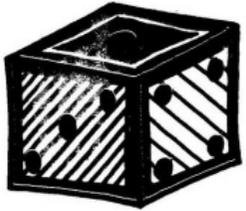
3

X

1

2

# DISGRAFIA



d d d d

d d d d

d d d d

d d d d

d d d d

d d

d d d d  
d d d

dado dedo dias dos  
dado d d

Handwriting practice lines consisting of multiple sets of horizontal lines (top blue, middle dashed, bottom red) for tracing and independent writing.

www.eyecanlearn.com

HOME EYES CAN LEARN » GETTING STARTED TRACKING » PERCEPTION » TEAMING » FOCUSING » VMI

TRACKING: FIXATION TRACKING: CENTRAL-PERIPHERAL INTEGRATION  
TRACKING: SACCADES TRACKING: PURSUITS

How are parents to know if their children's attention and/or school struggles are related to poor vision skills? One way to determine if vision is playing a significant role is to evaluate their symptoms. A simple assessment tool gives you a realistic measure of the chances that your child's visual system is interfering with his/her ability to read, learn, and remain on task.

Read More

MOST RECENT ARTICLES EYE CAN LEARN IS GETTING A FACELIFT!

An Important Word to Parents Eye Can Learn has enjoyed a decade of providing fun exercises to help improve

www.eyecanlearn.com

HOME EYES CAN LEARN » GETTING STARTED TRACKING » PERCEPTION » TEAMING » FOCUSING » VMI

VISUAL DISCRIMINATION VISUAL MEMORY  
VISUAL SPATIAL RELATIONS SEQUENTIAL MEMORY  
VISUAL CLOSURE VISUAL FIGURE GROUND  
VISUAL FORM CONSTANCY

concentrate on developing good tracking, focusing, eye teaming, and perceptual skills to help your child have the visual tools he or she needs in today's visually demanding world. Let's get started!

Read More

MOST RECENT ARTICLES EYE CAN LEARN IS GETTING A FACELIFT!

An Important Word to Parents Eye Can Learn has enjoyed a decade of providing fun exercises to help improve

# QUAL A IMPORTÂNCIA DESTA DISSUSSÃO?

frontiers Frontiers in Psychology

TYPE Original Research  
PUBLISHED 09 February 2023  
DOI 10.3389/fpsyg.2023.1034749

Check for updates

## OPEN ACCESS

EDITED BY  
Luis Falsca,  
University of Algarve,  
Portugal

REVIEWED BY  
S. E. Mol,  
Leiden University,  
Netherlands  
Shobana Mustil,  
Pace University,  
United States

\*CORRESPONDENCE  
Maíra Anelli Martins  
✉ maíra.aneli@gmail.com

SPECIALTY SECTION  
This article was submitted to  
Educational Psychology,  
a section of the journal  
Frontiers in Psychology

RECEIVED 02 September 2022  
ACCEPTED 20 January 2023  
PUBLISHED 09 February 2023

CITATION  
Martins MA, Begeny JC and Capellini SA (2023)  
Translation and cultural adaptation of the  
HELPS Reading Fluency Program into Brazilian  
Portuguese: A report of systematic adaptation  
processes and initial evidence of efficacy.  
*Front. Psychol.* 14:1034749.  
doi: 10.3389/fpsyg.2023.1034749

COPYRIGHT  
© 2023 Martins, Begeny and Capellini. This is  
an open-access article distributed under the  
terms of the [Creative Commons Attribution  
License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or  
reproduction in other forums is permitted,  
provided the original author(s) and the  
copyright owner(s) are credited and that the  
original publication in this journal is cited, in  
accordance with accepted academic practice.  
No use, distribution or reproduction is  
permitted which does not comply with these  
terms.

## Translation and cultural adaptation of the HELPS Reading Fluency Program into Brazilian Portuguese: A report of systematic adaptation processes and initial evidence of efficacy

Maíra Anelli Martins<sup>1\*</sup>, John C. Begeny<sup>2</sup> and Simone Aparecida Capellini<sup>1</sup>

<sup>1</sup>Investigation Learning Disabilities Laboratory, Department of Speech and Hearing Sciences, São Paulo State University "Júlio de Mesquita Filho" (UNESP), Marília, Brazil, <sup>2</sup>Department of Psychology, College of Humanities and Social Science, North Carolina State University, Raleigh, NC, United States

**Introduction:** Across multiples languages, research demonstrates the important relationship between reading fluency and comprehension. Put simply, a fluent reader has greater attention and memory resources to use higher-order functions in reading, resulting in better comprehension of text. Some reading fluency interventions have shown positive results in improving students' text reading fluency and comprehension; however, this research has predominantly been conducted with English-speaking students. For instance, until this report, a comprehensive search revealed only one prior study that evaluated an intervention strategy designed to improve students' reading fluency in Brazilian Portuguese and no prior studies evaluated an intervention program with that population of students.

**Methods:** The main goals of this two-part project were to (a) systematically translate, culturally adapt, and pilot test the Helping Early Literacy with Practice Strategies (HELPS) reading fluency program for use in Brazilian Portuguese (referred to as *HELPS-PB*); and (b) conduct a preliminary quasi-experimental study of the HELPS-PB program with 23 students in grades 3 to 5 who needed a reading fluency intervention.

**Results and Discussion:** This report documents the processes and successful adaptation of existing English- and Spanish-versions of HELPS into a new HELPS-PB program. It also offers preliminary evidence showing that students receiving HELPS-PB significantly improved their text reading fluency compared to students in a control group. Implications for research, practice, and the adaptation of reading fluency programs into other languages are discussed.

## KEYWORDS

reading fluency, intervention, reading development, automaticity, visual word recognition, HELPS program, language adaptation

frontiers Frontiers in Psychology

TYPE Original Research  
PUBLISHED 12 January 2023  
DOI 10.3389/fpsyg.2022.1063021

Check for updates

## OPEN ACCESS

EDITED BY  
Anna Maria Re,  
University of Turin,  
Italy

REVIEWED BY  
Antonio Parziale,  
University of Salerno,  
Italy  
Luciana Cidrim,  
Universidade Católica de Pernambuco,  
Brazil

\*CORRESPONDENCE  
Giseli Donadon Germano  
✉ giseliger@yahoo.com.br

<sup>1</sup>These authors have contributed equally to  
this work and share first authorship

SPECIALTY SECTION  
This article was submitted to  
Educational Psychology,  
a section of the journal  
Frontiers in Psychology

RECEIVED 06 October 2022  
ACCEPTED 23 December 2022  
PUBLISHED 12 January 2023

CITATION  
Germano GD and Capellini SA (2023)  
Handwriting fluency, latency, and kinematic  
in Portuguese writing system: Pilot study  
with school children from 3rd to 5th grade.  
*Front. Psychol.* 13:1063021.  
doi: 10.3389/fpsyg.2022.1063021

COPYRIGHT  
© 2023 Germano and Capellini. This is an  
open-access article distributed under the  
terms of the [Creative Commons Attribution  
License \(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or  
reproduction in other forums is permitted,  
provided the original author(s) and the  
copyright owner(s) are credited and that  
the original publication in this journal is  
cited, in accordance with accepted  
academic practice. No use, distribution or  
reproduction is permitted which does not  
comply with these terms.

## KEYWORDS

## Handwriting fluency, latency, and kinematic in Portuguese writing system: Pilot study with school children from 3rd to 5th grade

Giseli Donadon Germano<sup>\*1</sup> and Simone Aparecida Capellini<sup>1</sup>

<sup>1</sup>Learning Disabilities Investigation Laboratory, Department of Speech and Hearing Sciences, São Paulo State University "Júlio de Mesquita Filho" (UNESP), Marília, São Paulo, Brazil

Studies have referred to the interaction between orthographic and motor aspects during the production of handwriting. However, studies with Brazilian Portuguese are still lacking. Hence, the aim of this study was to compare orthographic regularity, based on the Portuguese writing system, in high (HF) and low (LF) frequency words, in relation to latency and kinematic variables in students from the 3rd to the 5th grade of elementary school. This is a cross-sectional pilot study, with a convenience sample of 95 children participated in this study, from 3rd to 5th grade level attending a state elementary school. All were submitted to the following procedures of computerized evaluation of handwriting and submitted to the task of writing 15 HF and 15 LF words, selected according to the frequency criteria and classified according writing coding rule. Results indicated that for HF words, there was a decrease in writing and disfluencies production time, for all coding rules, from 3rd to 5th grade. However, for LF words, the more unpredictable orthographic affect production duration time, movement fluency, and students became more dependent on the use of gaze to check spelling aspects. This study revealed that lexical and sub-lexical activation affected motor production. For HF and LF words, lexical and sublexical process favored motor programming. However, for LF words, despite the maturation and school progression for the motor planes, there was an increase in latency time and in the need to search for word information, measured by the gaze variable for words with greater irregularity. This study has provided some evidence that linguistic variables such as orthographic regularity and word familiarity affect handwriting performance in Brazilian Portuguese written language.

## KEYWORDS

learning, handwriting, academic competencies, evaluation, social vulnerability



**Muito Obrigada pela atenção!!!**