

# **MONITORING THE RIGHT TO EDUCATION IN BRAZIL**

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**JOSÉ FRANCISCO SOARES**

Emeritus Professor - UFMG and National Council of Education

Lemann Center, Stanford University

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# Summary

1. Concepts
2. Students' school trajectories
3. Learning inequalities
4. Public policies

# **I – Concepts**

# Education

Education is Learning.

Learning requires schools.

# Learning Categories

## **Knowledge:**

- Disciplinary
- Skills
- Attitudes and Values

## **Competency:**

- Mobilization of knowledge to solve life problems

# What are the essential learnings?

Common Core: BNCC

International Benchmark: PISA

# Educational Systems Monitoring

Results: Access, “Permanence”, Learning,

that require

Conditions: School infrastructure, teachers, school climate and culture.

# Right of Education realization

Educational outcomes should be seen primarily as the realization of the right to education.

To monitor the right of education = monitoring students' outcomes and school's conditions.

# Monitoring Educational Outcomes

Individual Perspective: Level reached by the learning indicator.

Social perspective: Difference in the learning indicator's values between social groups.

“Quality of education” requires socially accepted levels of indicators of both dimensions.

# Monitoring the Access

It depends on the demographic census, which occurs every 10 years.

Therefore, it is necessary to forecasts, each year, for each municipality, the number of potential students for every school grade.

Difficult problem, results will be imperfect, but very useful for educational planning.

## **II – Students' school trajectories**

# Definition

Association between the student's age, on March 31, and the grade he or she is enrolled, and the respective school result for that calendar year.

# **“Permanence” monitoring**

School census data, with individual student ID, is available, since 2007.

The use of these data is the new frontier in monitoring the right to education.

# School Success

For each student, in each calendar year:

Success = Approval and Promotion

Failure = Drop out, Retention [“trajectories anomalies”] or School evasion,

# Trajectories classification

Four groups, using Success variable for each calendar year 2007-2015

1. Regular,
2. Trajectories with only one anomaly: retention or “drop-out”,
3. Trajectories with two anomalies, but no school “evasion”,
4. Trajectories with more than two anomalies or evasions.

## Regular trajectories by municipality, by race, gender 2007-2015

Color/Race	Trajectory type				Students
	1	2	3	4	
Undeclared	0,39	0,20	0,11	0,29	1026066
White	0,57	0,21	0,09	0,13	967657
Yellow	0,48	0,19	0,10	0,23	13149
Brown	0,39	0,21	0,12	0,27	1127921
Black	0,35	0,21	0,13	0,31	114802
Indigenous	0,17	0,15	0,11	0,58	19146
Total	0,44	0,21	0,11	0,24	3268741

# Policy goal

The student trajectories should be used in every educational monitoring.

### **III – Learning inequalities**

# Monitoring of the learning

Usually made with data from Prova Brasil.

Therefore, it uses only the learning data only from the students that survived in the education system.

The metric assumes very low learning expectations both in reading and mathematics.

# Using IDEB as a monitoring tool

IDEB is the compass of Brazilian basic education, but

- It excludes students who have evaded the school system;
- It is compatible with a policy of student retention and of the transference of older students to adult education;
- It is insensitive to inequalities between groups of students.

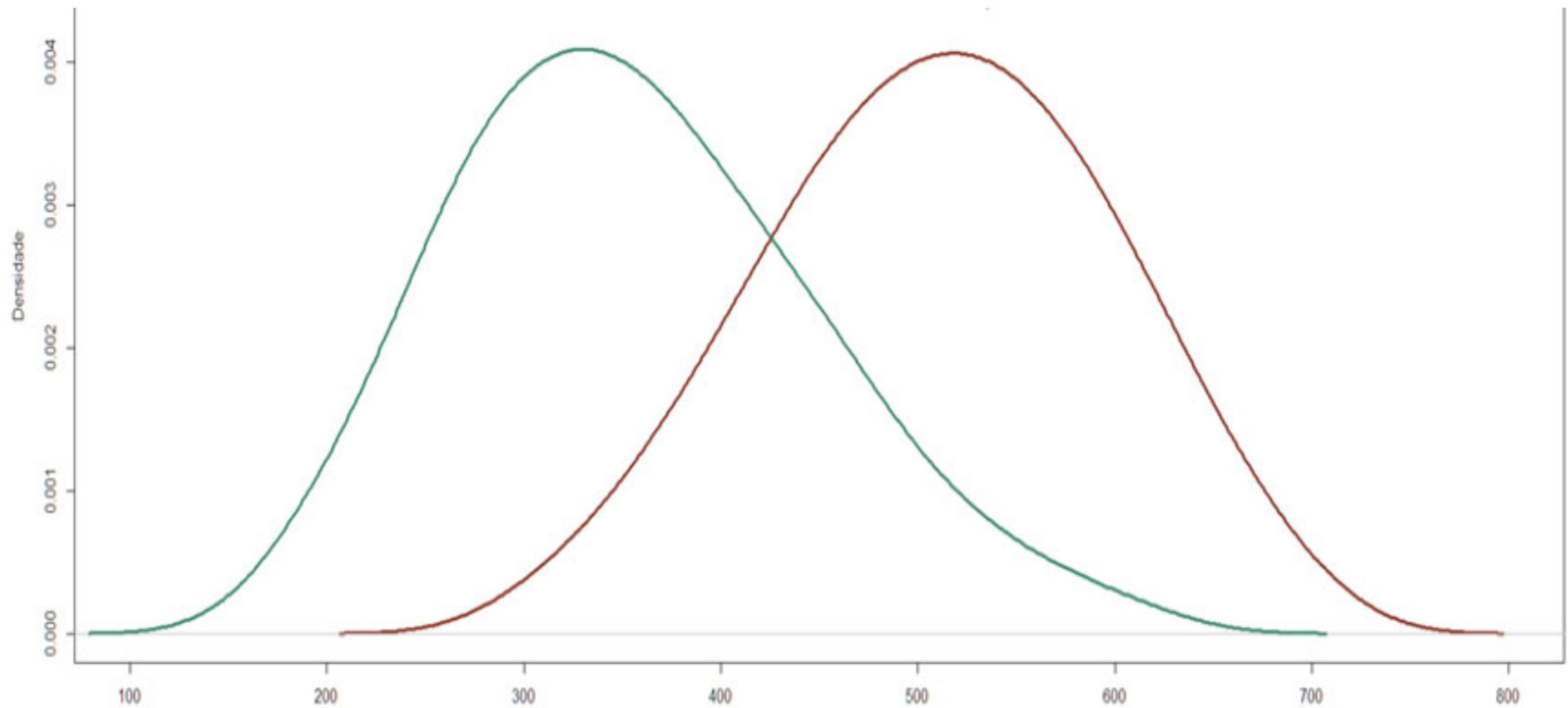
## Average percentage of students in each type of trajectory in the municipalities classified by IDEB category

IDEB	Tipo de Trajetória			
	1	2	3	4
Baixo	17,2	18,2	14,7	49,9
Médio Baixo	25,2	20,7	14,9	39,1
Médio	38,2	22,0	13,5	26,3
Médio Alto	55,5	21,0	10,4	13,1
Alto	64,5	19,1	8,1	8,3

# Variation

In the absence of social and economic constraints, students make choices that result in differences in the measures of their learning.

The study of both excellence and equity in educational outcomes should consider the natural variations in the measure of their learning.



# Excellence

It occurs when student learning assumes only values that represent learning that is compatible with full functioning of a person in society.

# Equity as process



# Equity in learning

It occurs only when student groups, defined by any social criteria, have the same distribution for the learning measure considered.

# Equity vs. Inequality

Equitable educational policies are compatible with inequalities in outcomes.

Therefore, the concept of educational inequality must be considered in monitoring systems.

# Educational exclusion

Lack of excellence or equity generates educational exclusion.

A low SES student is educationally excluded if:

- did not learn what is needed for a full life.
- learned less than their higher socioeconomic peers.

# Inequalities - Mathematics Proficiency vs. Socioeconomic status

Grade	Calendar Year	SES Quintiles					Differene
		Lower	2	3	4	Higher	
4th or 5th	2007	180,2	187,8	192,7	197,9	204,5	24,4
	2009	184,7	197,5	205,5	212,4	220,1	35,4
	2011	187,2	199,1	207,5	215,7	224,9	37,7
	2013	183,8	198,2	208,3	219,7	228,7	44,9
	2015	194,2	206,4	216,5	226,2	234,1	39,8
	2017	197,2	211,7	221,9	231,4	239,3	42,1

# IDeA indicator

Unit of analysis: groups, not individuals

IDeA is an indicator that:

- accepts differences in outcomes between individuals;
- accurately captures all differences in results between groups.

<https://portalidea.org.br>



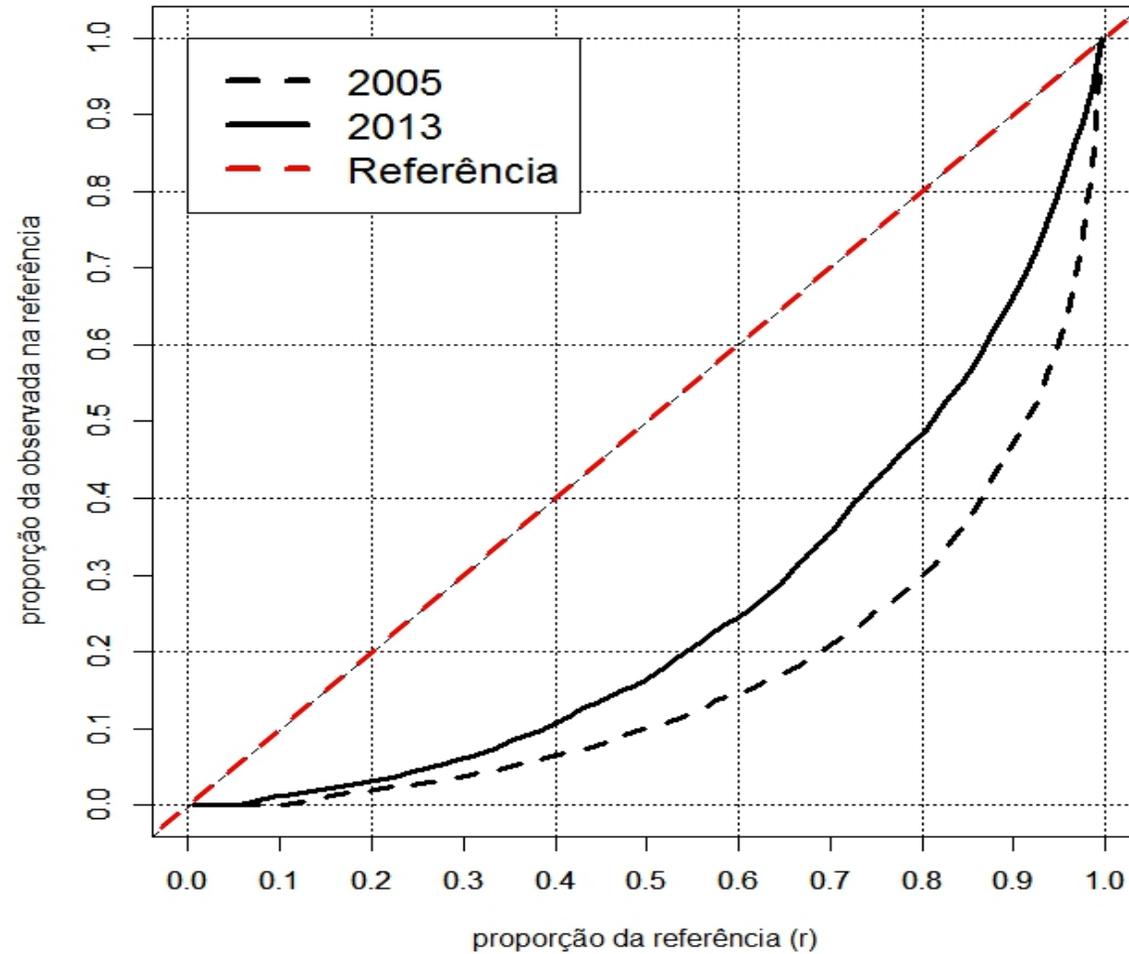
# Reference Distribution

Based on the PISA performance students' and from Brazil and several OECD countries.

The resulting distribution can be considered the educational excellence goal for Brazil.

For each municipality, the distance of its students learning distribution to this reference distribution is computed.

# Reference distribution and reading proficiency densities. Fifth grade students in 2005 and 2013 – Prova Brasil

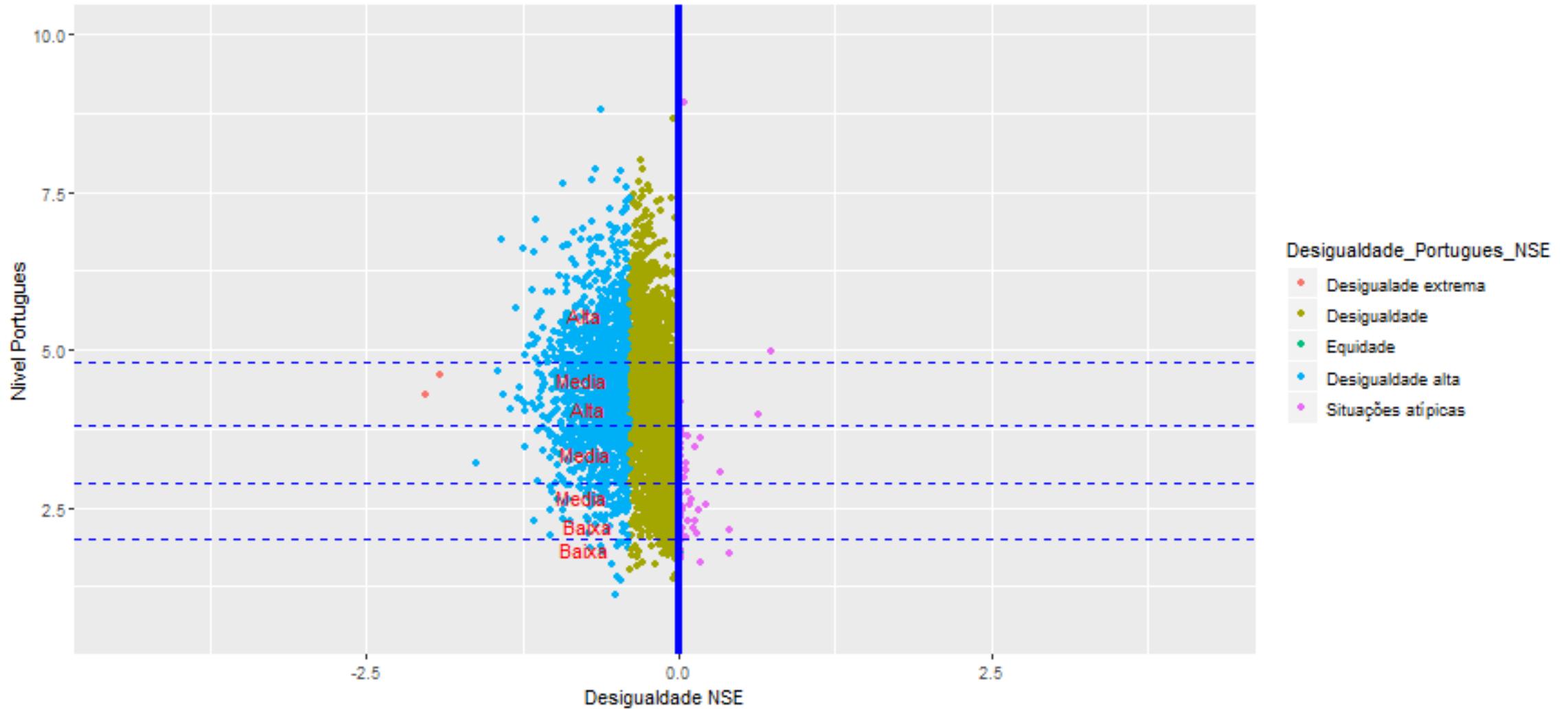


# Distance between distributions

KL (Kullback-Leibler):

$$KL(f_{\text{Ref}} : f_{\text{Obs}}) = \int_0^1 \log(g(r)) \cdot g(r) dr$$

# IDeA for reading- 5th Grade- and SES



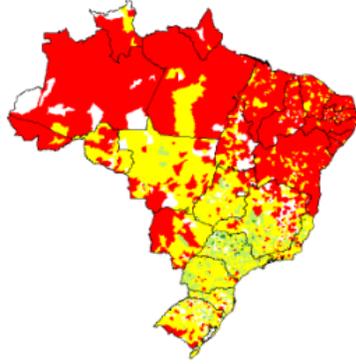
# Anos Iniciais do Ensino Fundamental

## Rede municipal

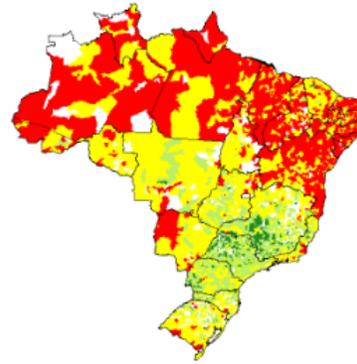
2005



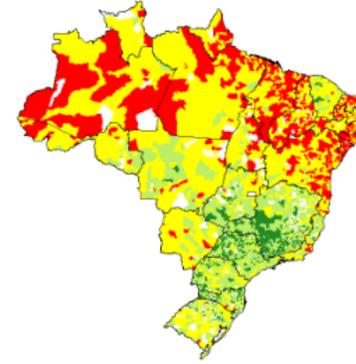
2007



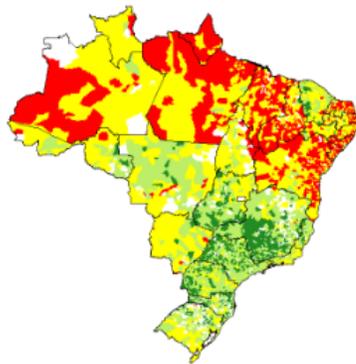
2009



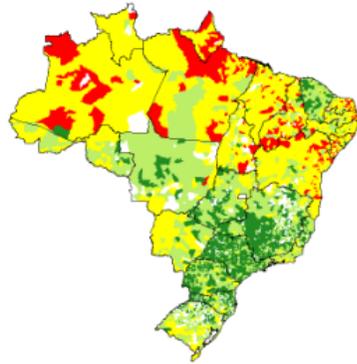
2011



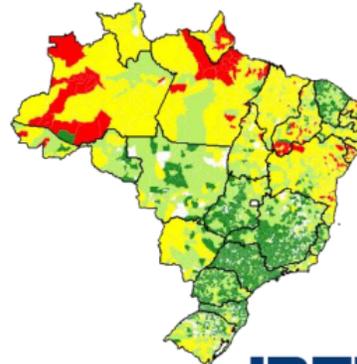
2013



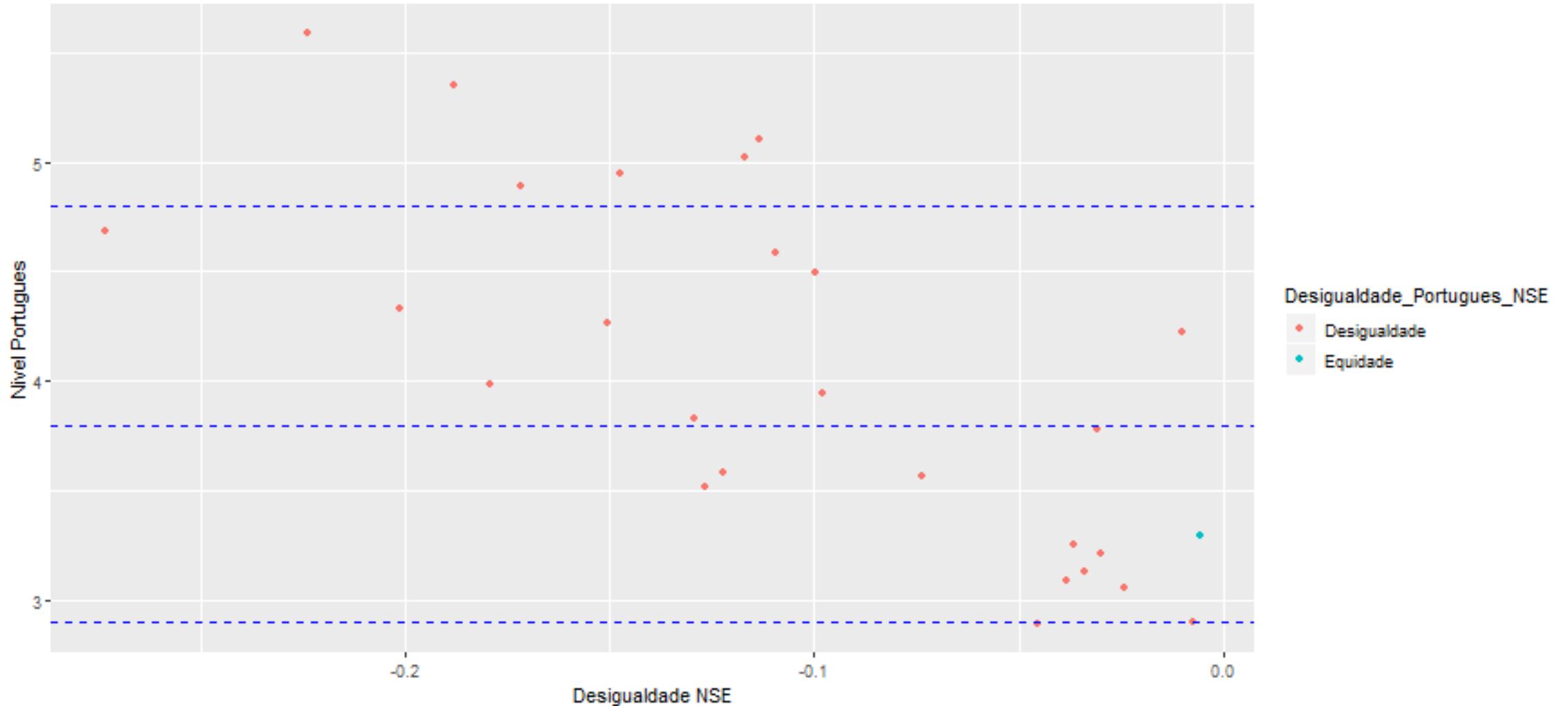
2015



2017



# IDeA for reading- 5th Grade- and SES for State Capitals



## **IV – Public policies**

# Principles for Policies

The school should be the unit of intervention, not the teachers.

Teachers should be full time in a single school.

Monitor the system using students' trajectories, not retention rates.

Change the learning metric in 2021.

High school for a few, increases inequalities.

# Policies

“Maximize minimum performance”.

“Quality for a few is not quality in Brazil”.

In Brazil, we naturalize inequalities and exclusion. Reversing this is the great social, economic and ethical battle.

OBRIGADO

francisco-soares@ufmg.br