

Using the international assessment to inform policy and practice

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- Can international assessments inform policy-making?
- Using international assessments to find policy responses
- Policy implications of the gradients
- Some final thoughts...

International assessments, policy making and learning outcomes improvement

- The role of assessment in the countries is to improve learning
- Technical aspects are relevant
 - Good test: Sampling, administration and operations are as important as psychometrics
 - If those elements are absent it is not possible to inform policy: difficult to solve a problem when the nature is not understood
- Only governments have the tools to correct market failures:
 - Information
 - Incentives

Do international assessments inform policy making?

- ▣ They follow a contextual framework
- ▣ In general analysis of
 - Curriculum
 - Macro environment, characteristics of the educational systems
- ▣ A model of the learning environment, processes and resources.

How do international assessments inform policy making?

- ▣ Students performance
- ▣ Students socioeconomic background and indicators
- ▣ Students, teachers and schools characteristics
- ▣ Equity in education
- ▣ Further analysis of education systems can be done combining information collected by these assessments.

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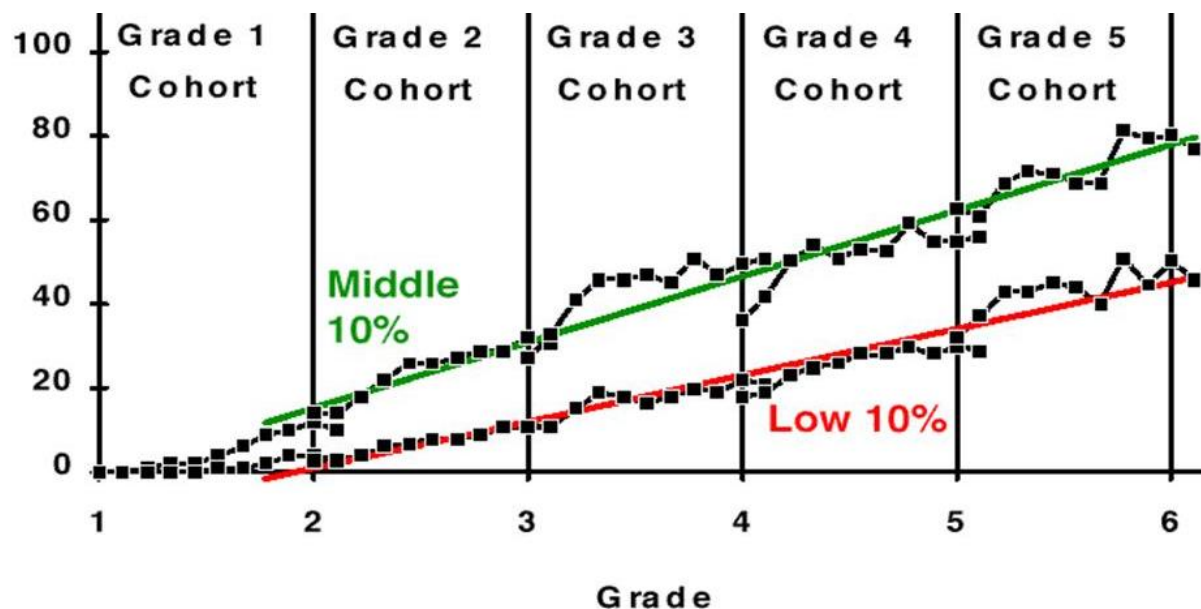
- Can international assessments inform policy-making?
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1. Is variation in educational performance among schools and countries significant?

- Possible to analyze the extent of the variation in performance among countries, schools, etc.
- **Indicator:** between and within school variance
- Variance PIRLS 2001
 - 31.2% is between countries
 - 20.6% is between schools within countries
 - 48.2% is between students within schools
- Range of scores is higher in wealthier countries that are more homogeneous in terms of achievement.

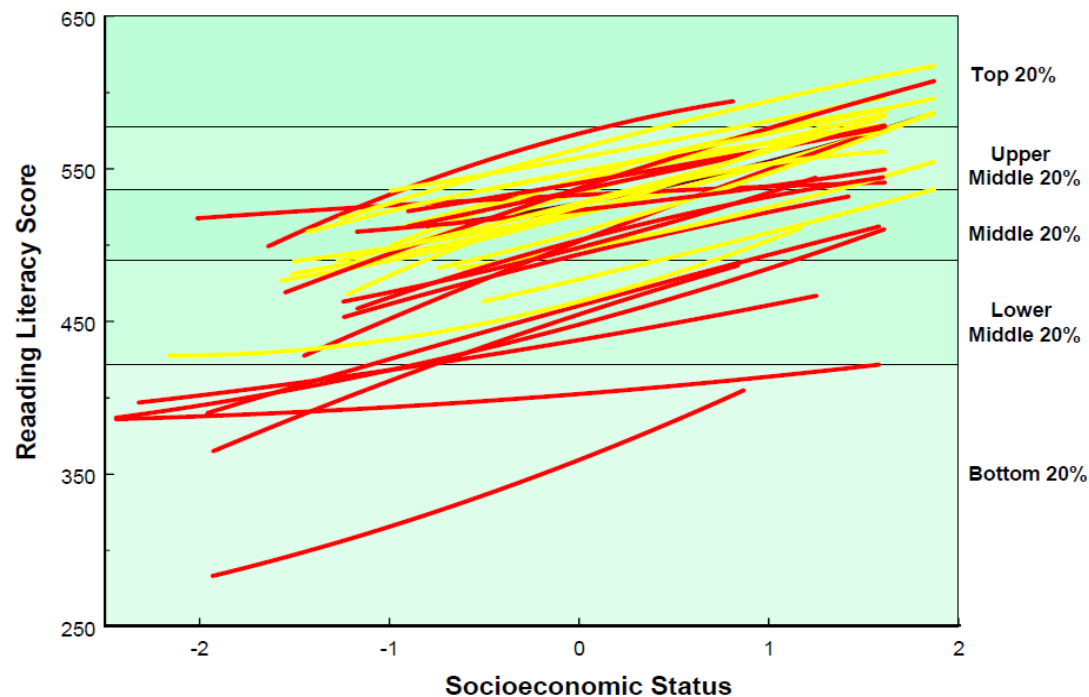
1. What about policies to address variation in educational performance?

- The policy problem: the kids who need to do the transition from learning-to-read to reading-to-learn
- Differences need to be addressed early if not it gets worse (words per minute)



2. Is the relationship between reading performance and socioeconomic status (SES) significant?

- **Key indicator:** SES gradient estimated using regression analysis
- Schools performance vary within country even after accounting by student's SES and school's mean SES..



Source: PIRLS, 2001.

3. Do schools outcomes vary after accounting by student's and school's mean SES?

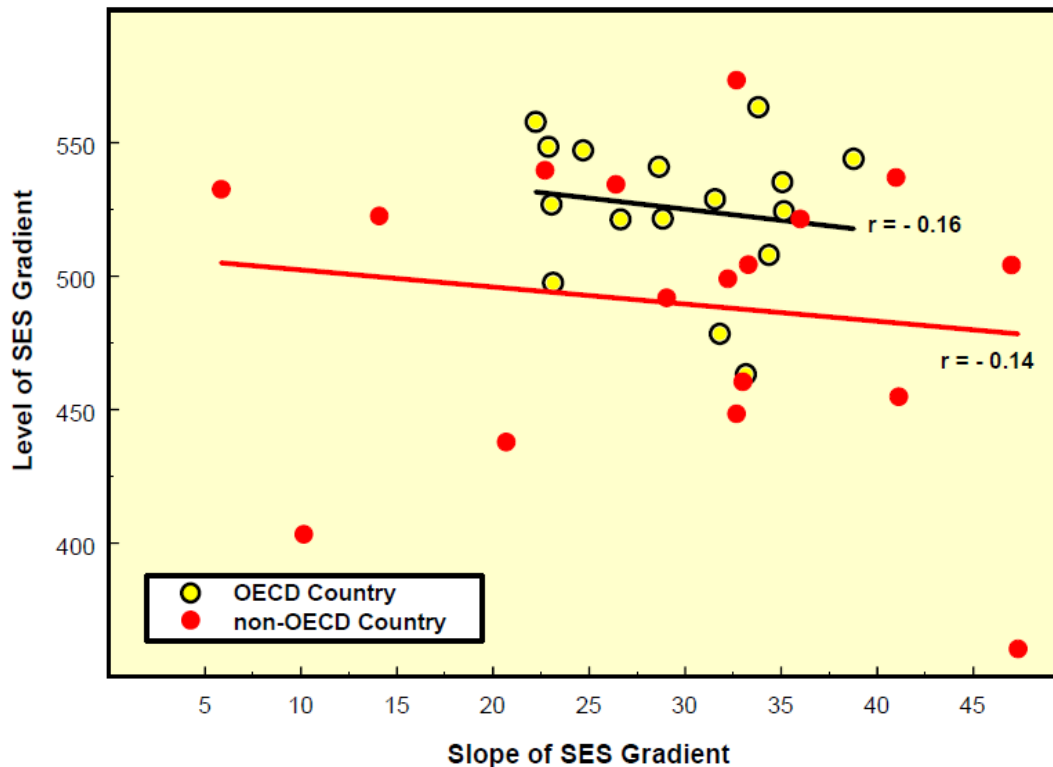
- **Key indicator:** mean score adjusted by SES.
- Two effects:
 - Type A: Mean score of student's by SES in each school
 - Type B: Student's SES once controlled school's mean SES
- Variance is reduced but schools still make a difference
- Way of identifying the ones that do something different

4. Are there diminishing returns in reading performance by SES?

- Is the effect of SES on student's achievement lower at higher SES levels?
 - Some countries do present diminishing returns, but others no effect or increasing returns.
- Is there a floor effect?
 - No
- Policy Implications
 - Advocates against targeted policy is needed as there is no minimum threshold .
 - Low levels of reading happen in average or above average SES

5. Are socioeconomic gradients converging as SES increases?

- Does variation in achievement reduce as SES increases?
- Correlation between mean scores adjusted by SES and SES slopes is negative: gradients converge.



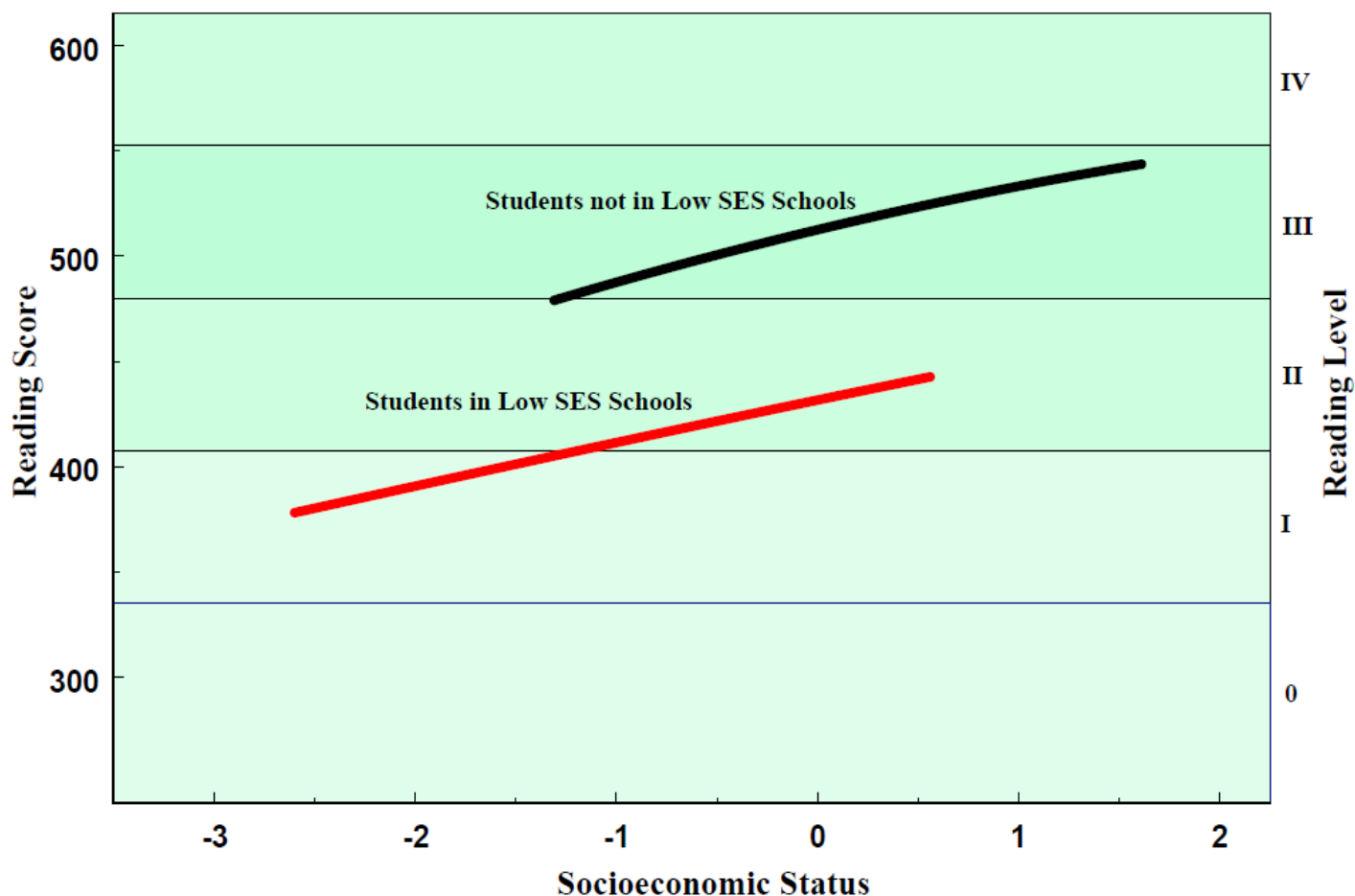
Source: PIRLS, 2001.

5. What do converging gradients mean in terms of policy making?

- Schools are doing well to address low SES children:
 - **Policy Implication:** Schools need to have special programs for low SES children to achieve uniform quality
- School quality is bad and affects less average and above average students who could get extra help
 - **Policy Implication:** get help for below SES average students

6. Is student's academic achievement being affected by school composition?

❑ Endogenous, contextual and correlated effects



6. Is student's academic achievement being affected by school composition?

▣ Results

- High (low) SES students tend to attend high (low) SES schools.
- Some overlap: students have notorious lower scores if attend a below average SES school.

▣ Policy implications

- If compositional effects dominate then policies should targeted schools of low SES but this does not grant anything. Why?
- Alternative: comprehensive reforms meaning relocations and a new architecture. Risks?

7. Do higher homogeneous intakes of schools imply better performance?

- Hierarchical analysis including standard deviation of SES for each school.
- Higher SD implies more heterogeneity.
- Effect varies significantly among countries but in general it is non significant
- **Policy implications**
 - Reducing heterogeneity would not help student's performance

8. How do school resources and school and policies and practices affect within and among schools variance?

▣ Multilevel models:

- Decompose in within and between school gradients.
- Model separately effects of family and of school factors.
- Interactions between families and school factors.

▣ Policy implications

- ▣ School resources, school and classroom policies and practices do affect student's outcomes.

9. Do school resources and classroom practices effects differ between rural and urban schools?

- Differences in i) school resources, and ii) classroom practices (disciplinary climate) and parental support between rural and urban schools contribute to the rural-urban gap.

	Urban schools		Suburban schools		Variance (% explained)
	Effect	(SE)	Effect	(SE)	
Unadjusted difference (vs. rural schools)	23.0	(4.6)	16.3^{sc}	(3.4)	1,674 (0%)
Adjusted for student background (SB) (SES, sex, and foreign-born)	17.1	(4.0)	12.8^{sc}	(3.2)	1,221 (27%)
Adjusted for school resources (SR), controlling for SB	14.1	(3.7)	10.7	(3.1)	1,153 (31%)
Adjusted for school and classroom policy and practice (PP), controlling for SB	16.6	(3.6)	13.1	(3.0)	1,142 (32%)
Adjusted for SB, SR, and PP	14.3	(3.4)	11.4	(3.0)	1,093 (35%)

Source: PIRLS 2001.

□ Policy implications

- School resources and classroom practices have an effect on rural-urban gaps.

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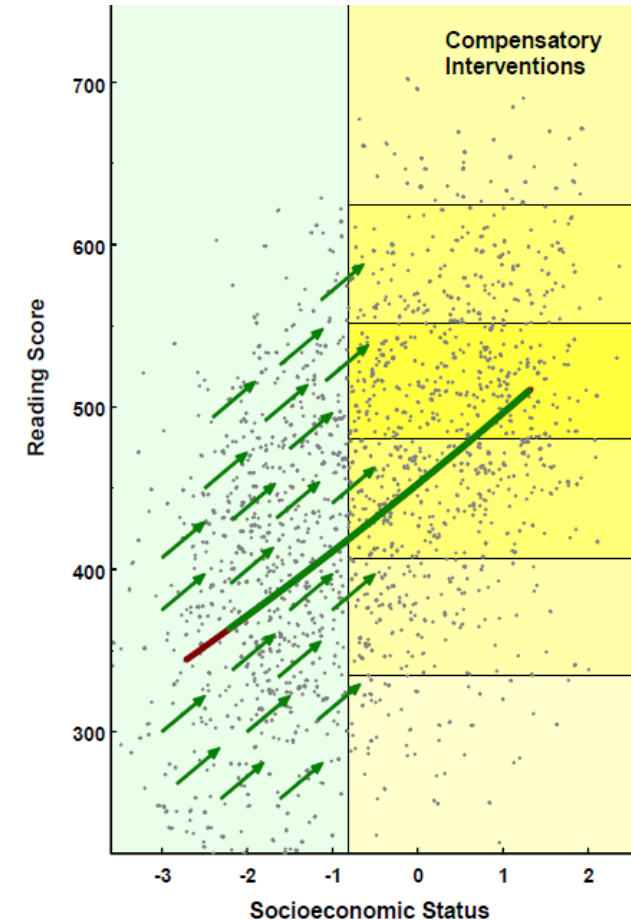
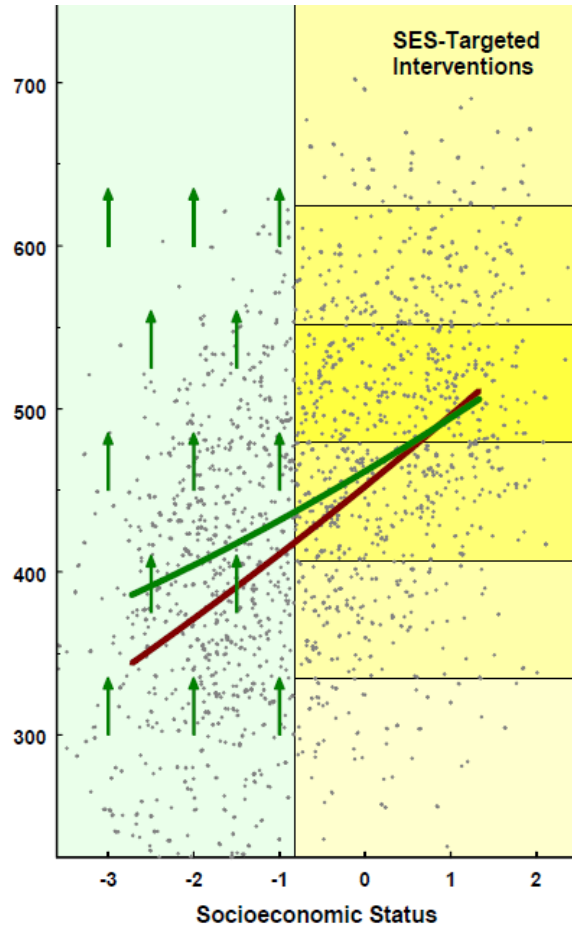
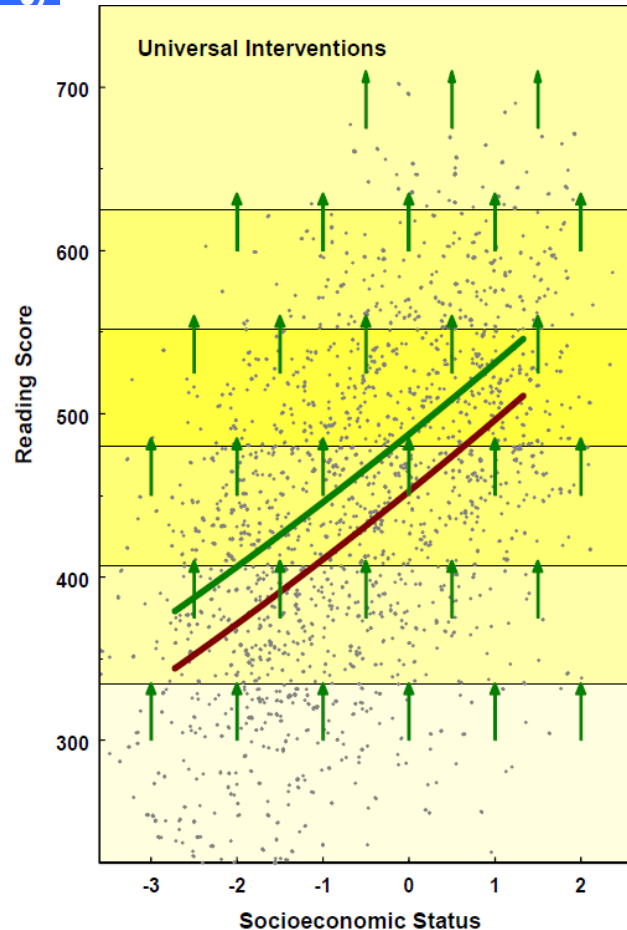
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Some policy simulations

- Policies that can be designed based on PIRLS data and analysis:
 - Universal interventions
 - SES targeted interventions
 - Compensatory interventions
 - Performance targeted interventions
 - Inclusive interventions

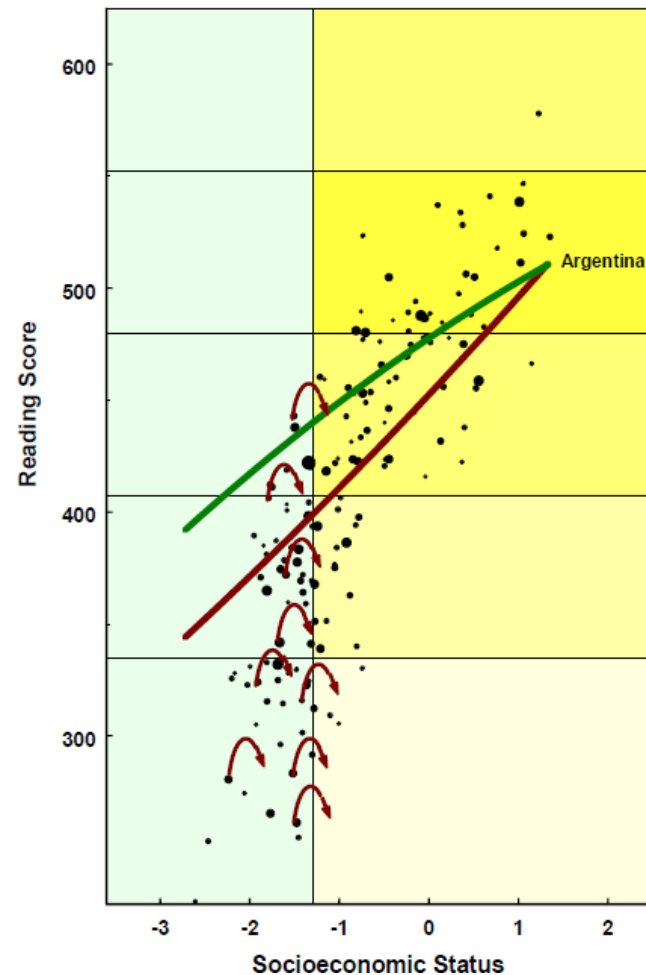
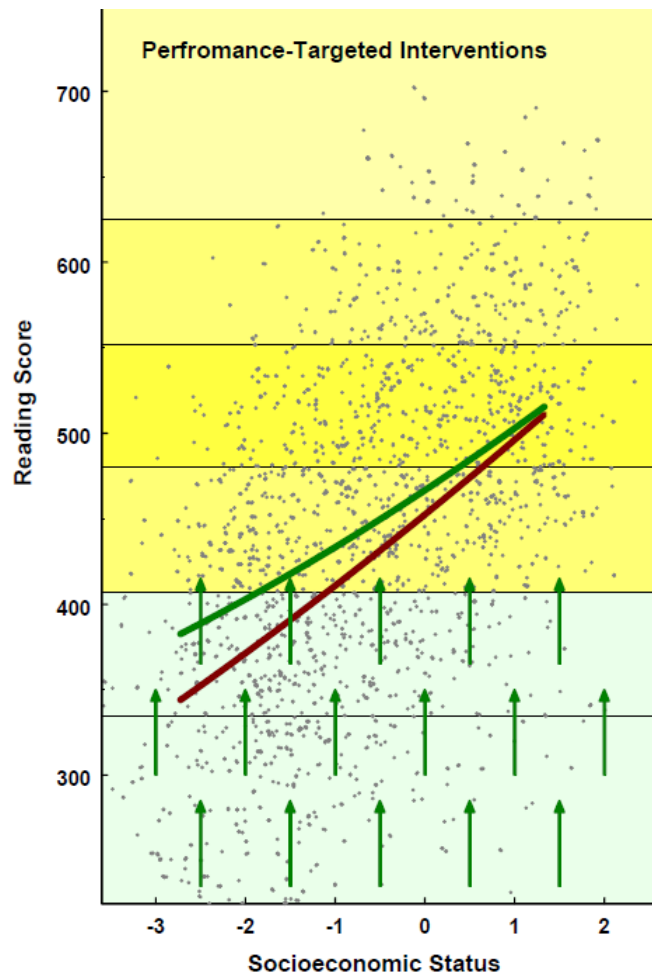
Some policy simulations

- Universal vs SES targeted interventions vs Compensatory



Some policy simulations

■ Universal vs SES targeted interventions vs Compensatory



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Some food for thought.....

- ❑ Full understanding of what data inform and do not inform is crucial
- ❑ Combination and analysis of achievement data and background information is needed for identification of impact.
- ❑ Aggregation and analysis of data allows governments to understand their own processes and evaluate their impact
- ❑ Is enough? No, partnerships and a broad capacity building strategy is needed

Thank you!

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