



Honing Hume's guillotine: reflections on the promise of school change

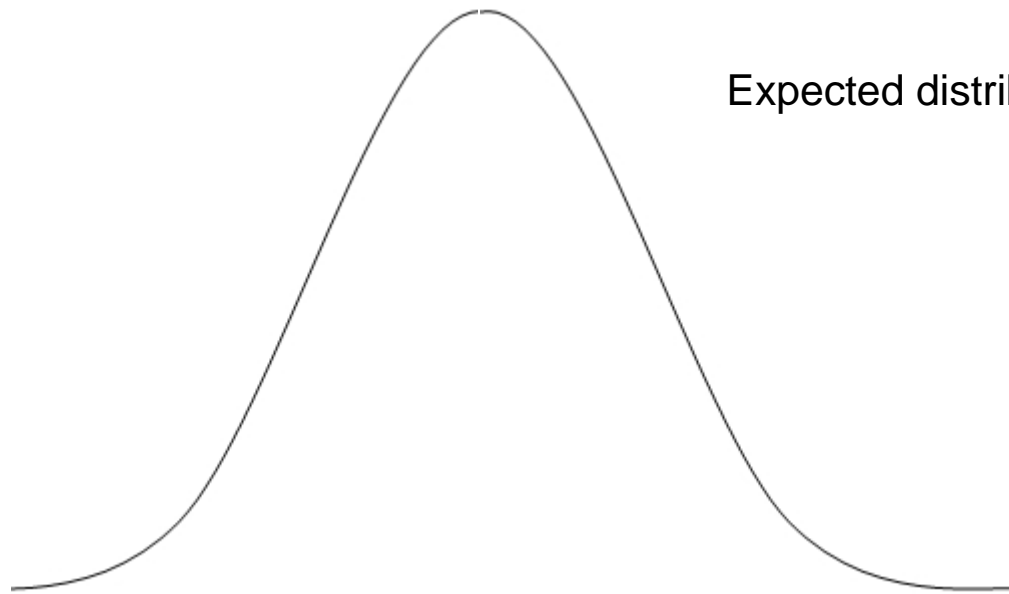
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Herbison Lecture NZARE 2010

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Can we design better schools to achieve more equitable outcomes?

1. We?
2. Equitable?



Expected distribution



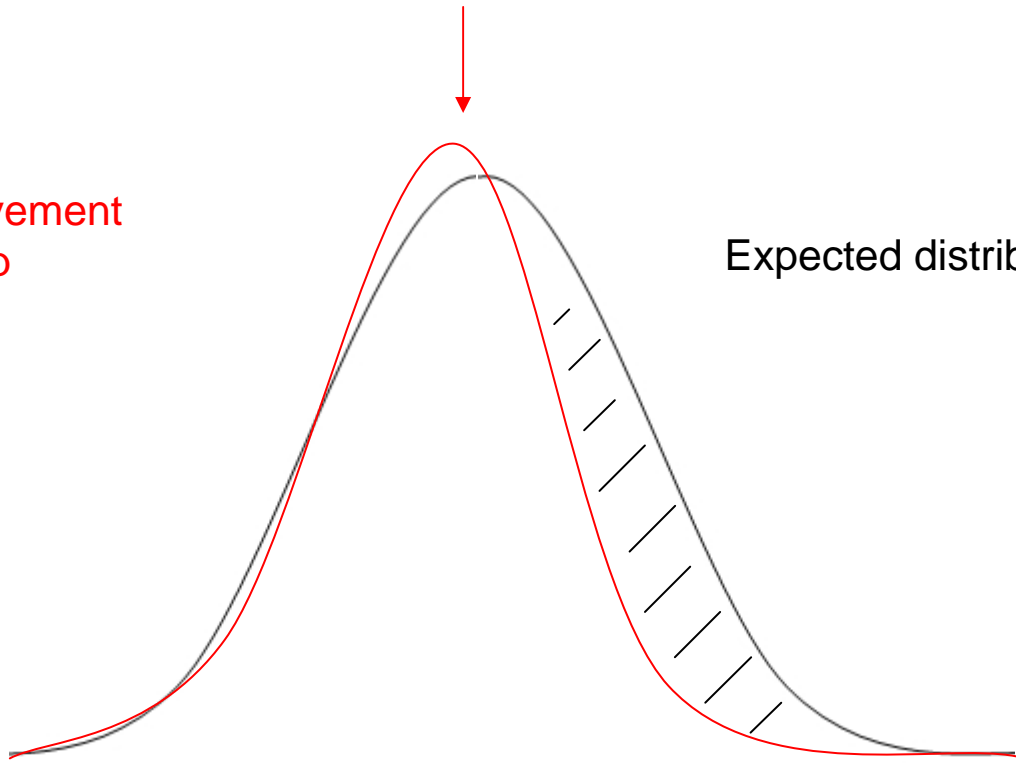
Low achievement group



Expected distribution



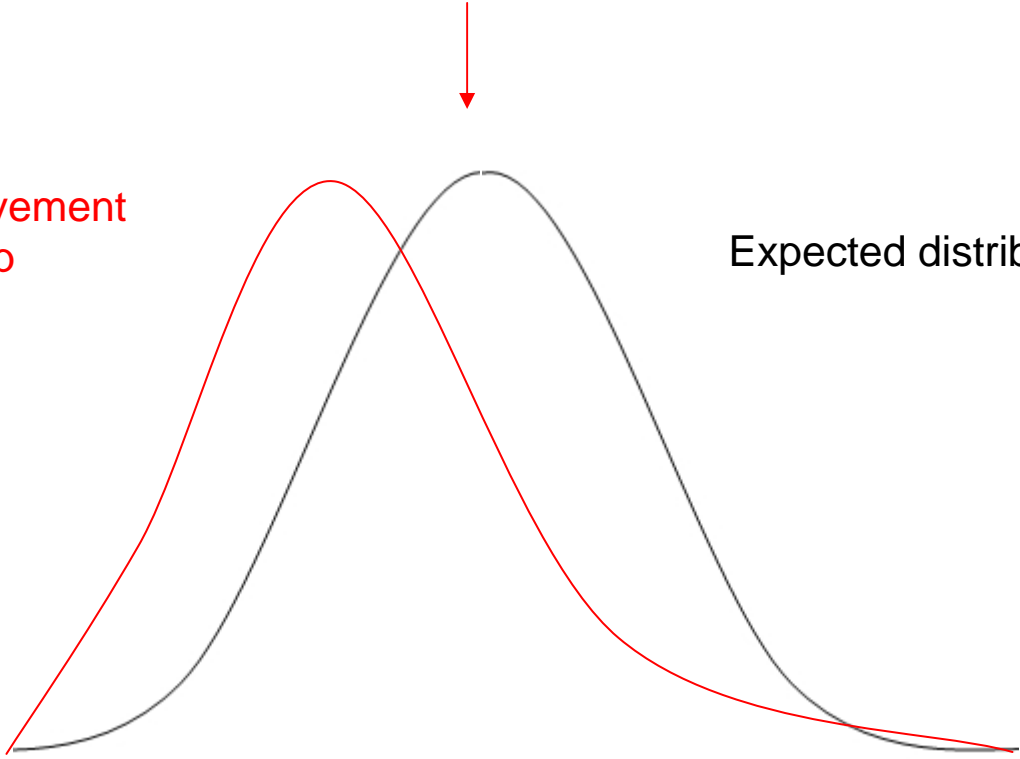
Low achievement group



Expected distribution



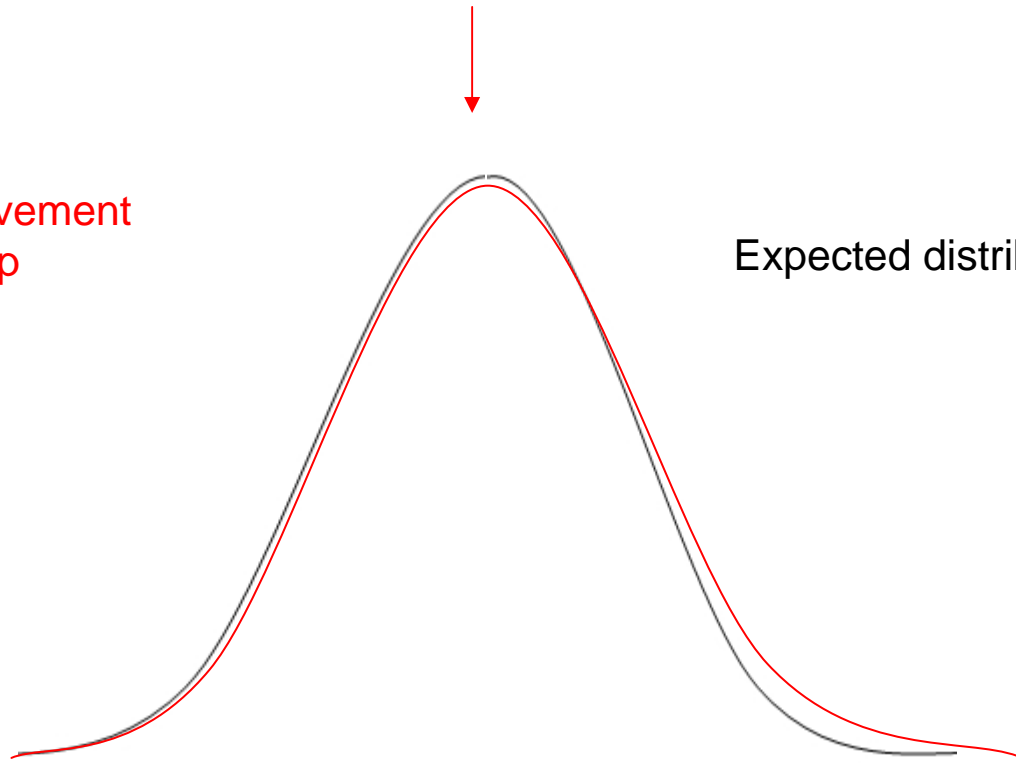
Low achievement group



Expected distribution



Low achievement group



Expected distribution

The talk

1. Not much (but some) cause for optimism
2. 4 sorts of explanations for limitations
3. But not sufficient (by themselves) to explain failures
4. Take a different view?

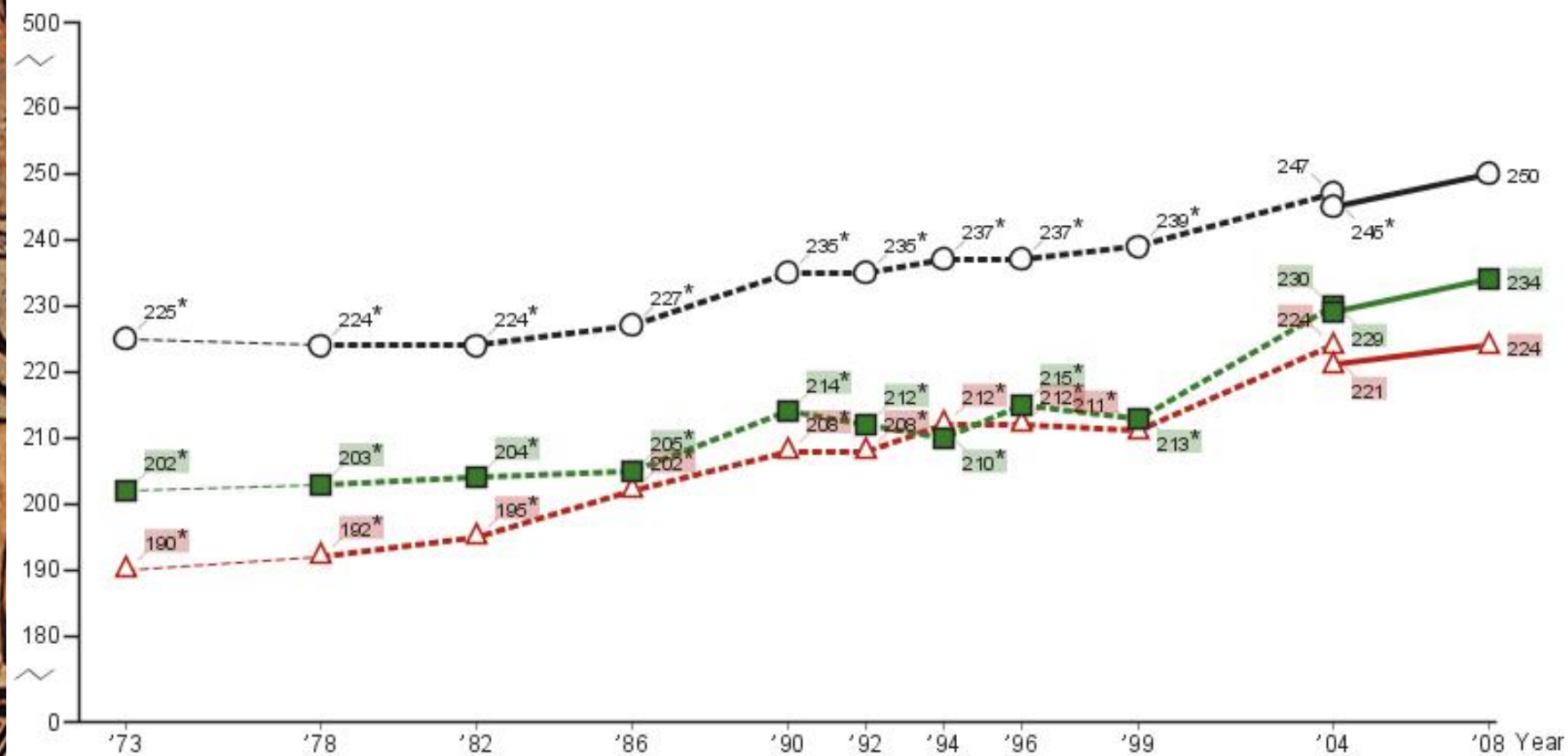
Honing Hume's guillotine

1. Ethics: Cant get an 'ought' from an 'is'
2. Just because schools cant (presently) be more effective doesn't mean schools ought to be ineffective
3. A research agenda with 2 propositions:
 1. If you want to know about something try and change it
 2. If you want to change it you had better get a good theory

Not much cause for optimism?

- ❖ Enduring 'gaps' -despite some positive trends
- ❖ despite many attempts (eg through waves of school reform)
 - Some notable successes

Scale score



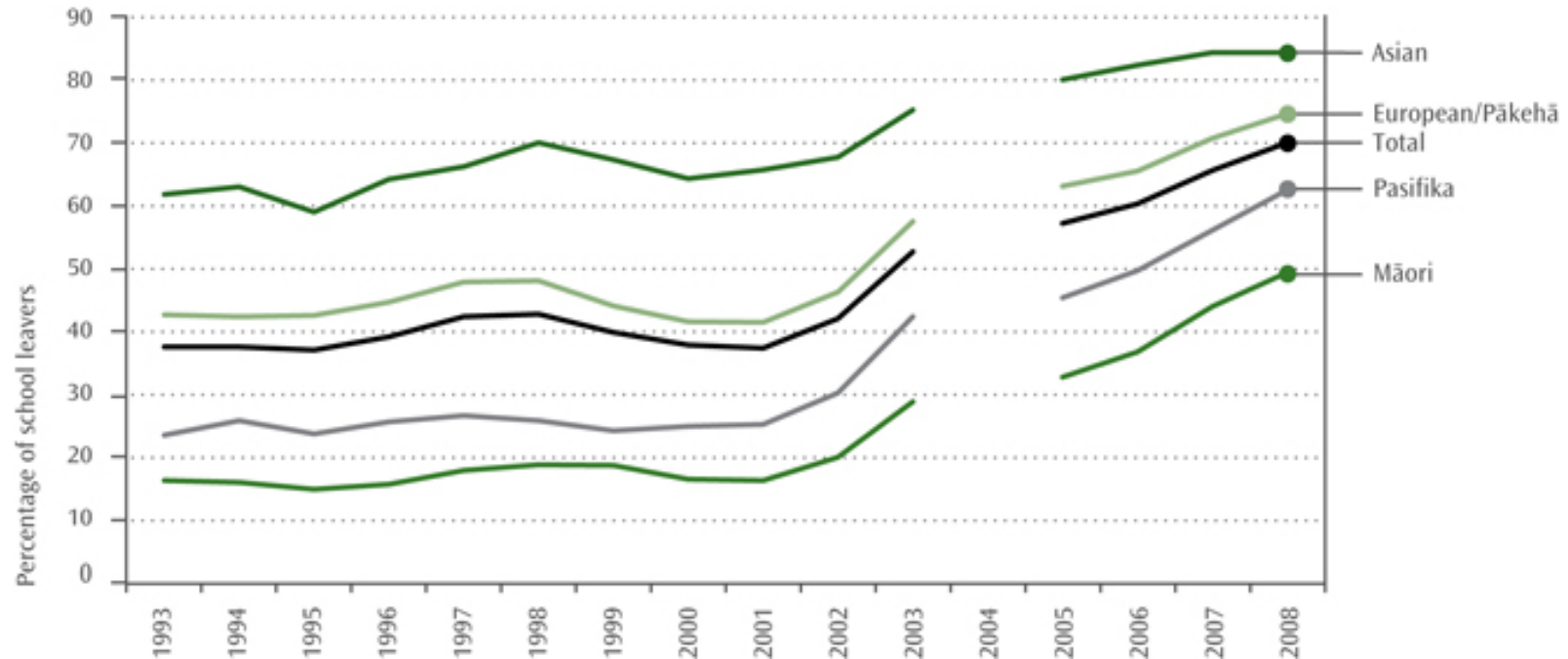
Key

White	○
Hispanic	■
Black	△
-----	Extrapolated data
-----	Original assessment format
-----	Revised assessment format

Add or remove results by clicking on the group name or symbol in the key. Roll your mouse over a data point to see more information.

[National Assessment of Educational Progress](#),
[National Center for Education Statistics](#)
[National Assessment Governing Board](#)
[Institute of Education Sciences](#), [U.S. Department of Education](#)

Percentage of school leavers with an NCEA Level 2 qualification or above, by ethnic group (1993 to 2008)

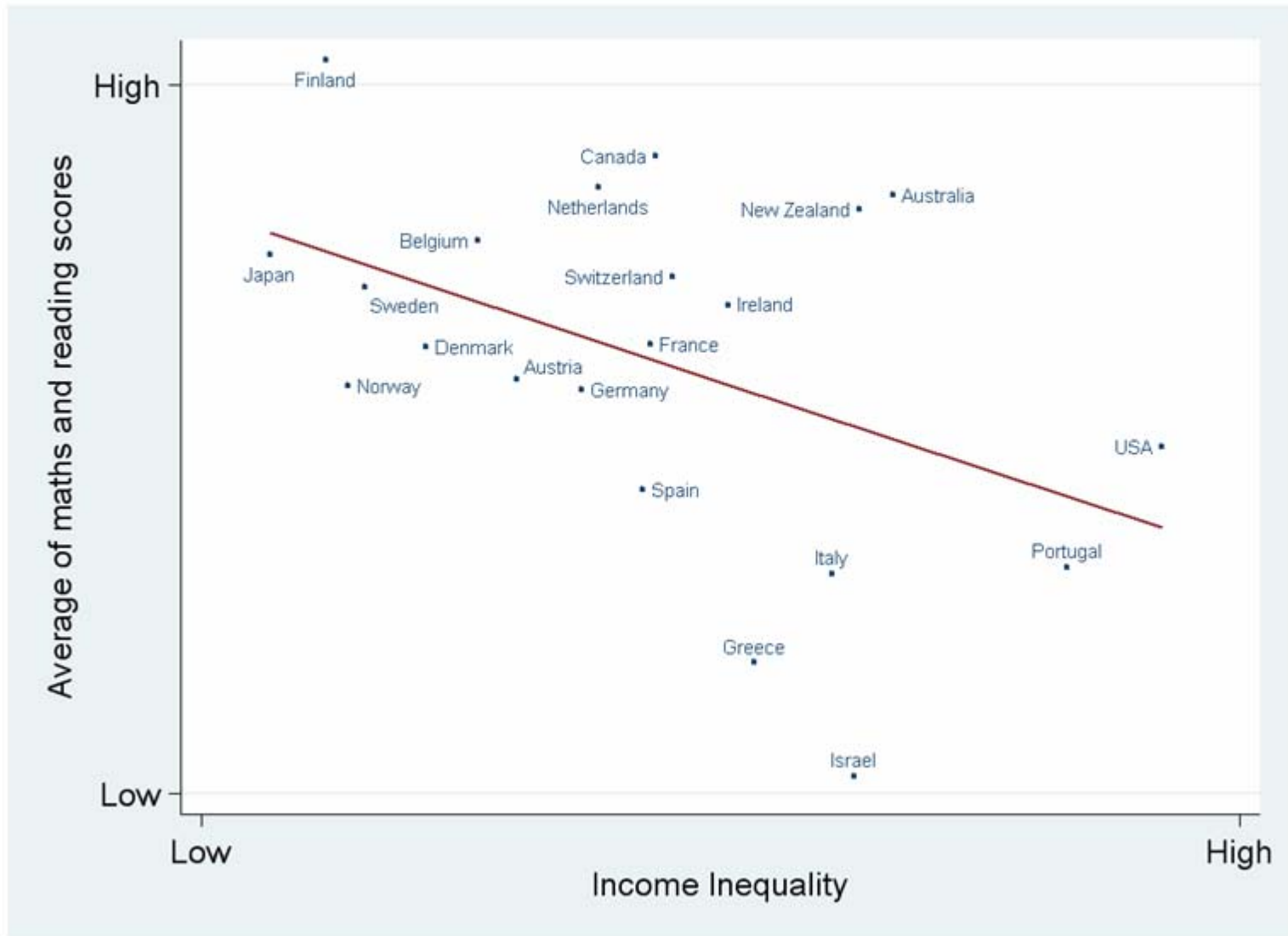


Source: Ministry of Education's Education Counts website www.educationcounts.govt.nz.

Not much cause for optimism?

- ❖ Enduring 'gaps' -despite some positive trends
- ❖ And many attempts (eg through waves of school reform)
 - Some notable successes
- ❖ Increasingly obvious just how pervasive are the effects of inequality

Educational Scores are Higher in More Equal Rich Countries



Explaining limits #1-schools select

Schools select from and promote particular knowledge and practices

1. Impressively broad agreement
2. Soft and hard versions
3. Considerable supportive evidence
4. But weak: too much variability country, regional, district, school levels and across time

High mathematics performance

High average performance

High average performance

Large socio-economic disparities

High social equity

Hong Kong-China

— Korea

— Finland

540

— Netherlands

— Liechtenstein

— Japan

— Canada

— Belgium

— Switzerland

— Australia

— New Zealand

520

— Czech Republic

— Denmark

— Iceland

— France

— Sweden

— Austria

Strong socio-economic impact on student performance

Socially equitable distribution of learning opportunities

— Germany

— Ireland

500

— Slovak Republic

— Norway

— Hungary

— Luxembourg

— Poland

— Spain

— Latvia

— United States

480

— Russian Federation

— Portugal

— Italy

Low average performance

Low average performance

Large socio-economic disparities

High social equity

460

Low mathematics performance

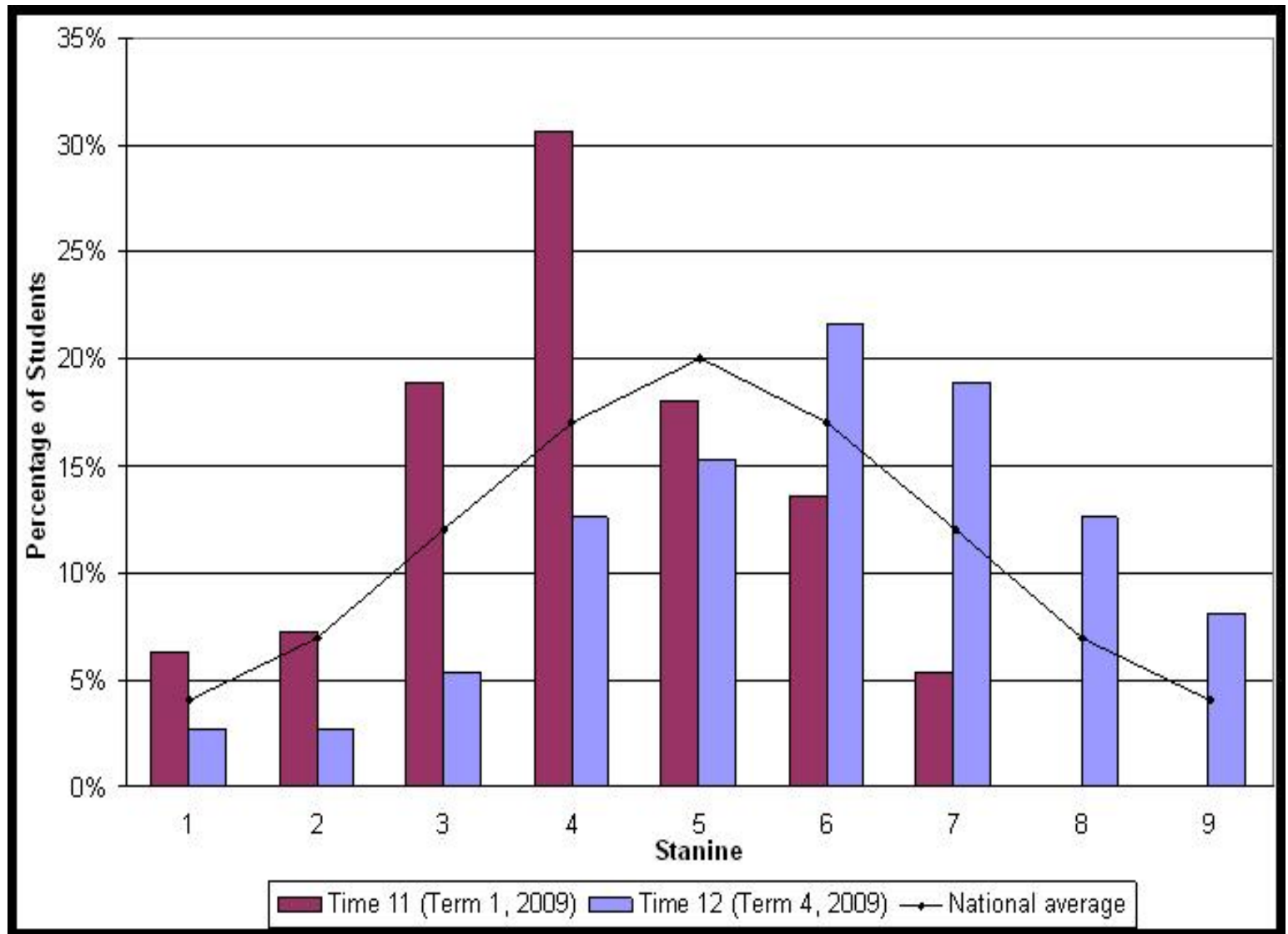
— Greece

Explaining limits #2: differential resourcing

Schools (and systems) rendered more or less effective by policy and resourcing levels

1. In US systematic differences between schools on many measures
2. Experimental evidence compelling
3. Begs the question - #1 in disguise?
4. Too much variability again (eg School A)

School 'A': start to end 2009



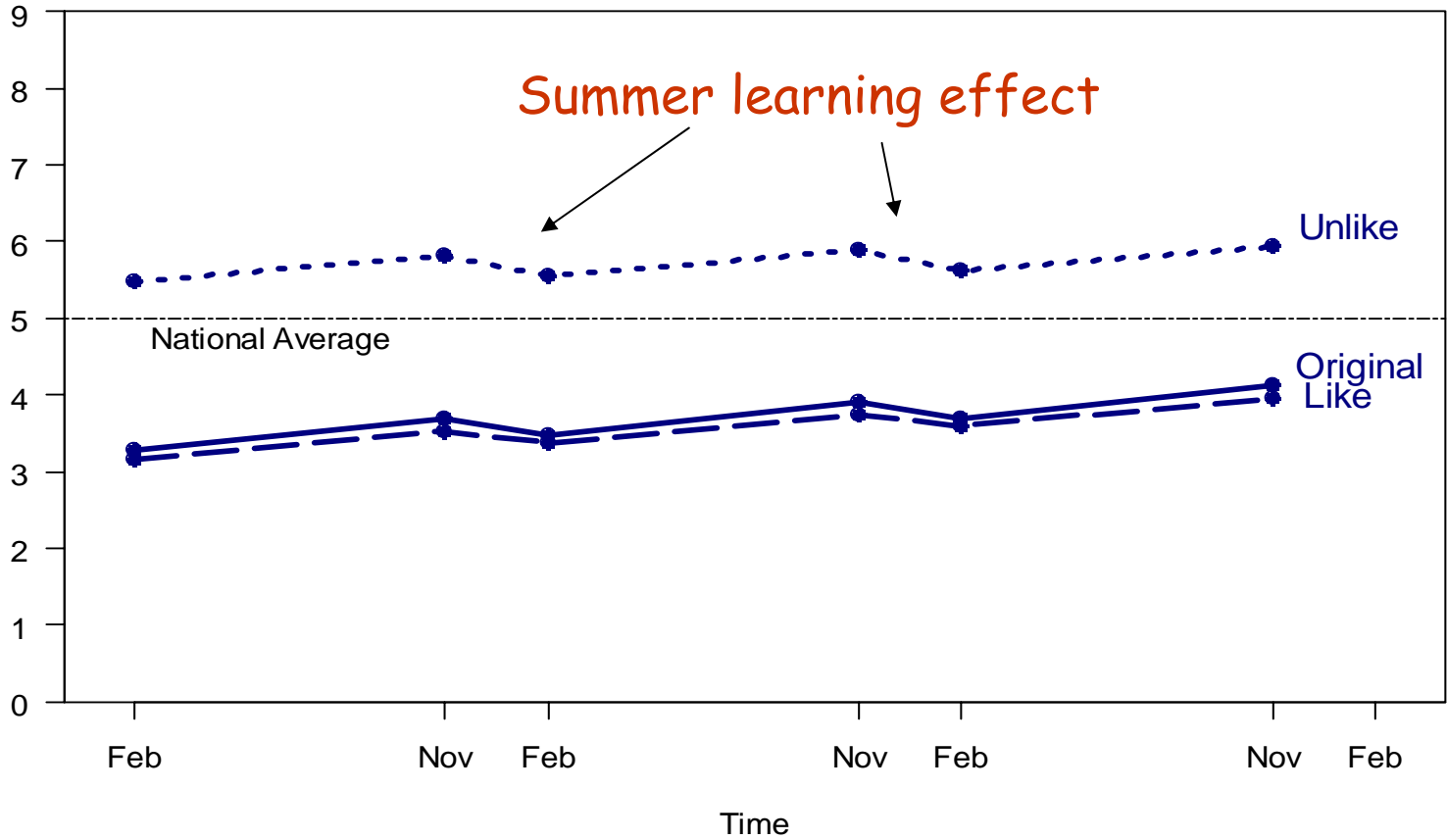
Explaining limits #3: OSFs

Schools limited by Out of School factors and limited coverage.

1. OSF disparities constrain schools
2. Schools effective while operating (eg Summer Learning Effect)
3. Strong evidence (with experimental)

Growth curves over three years: 3 clusters of schools

Estimated Stanine

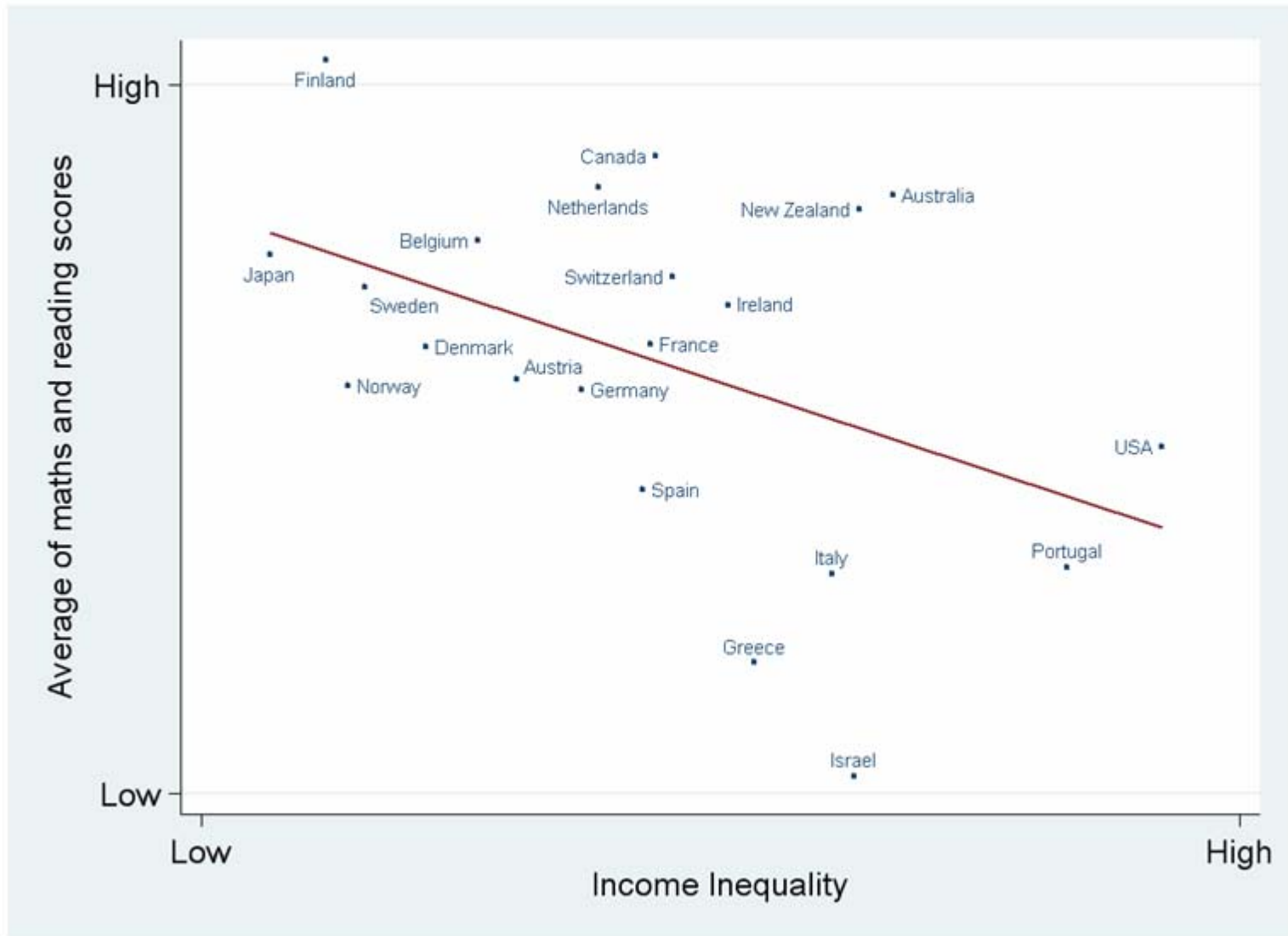


Explaining limits #3: OSFs

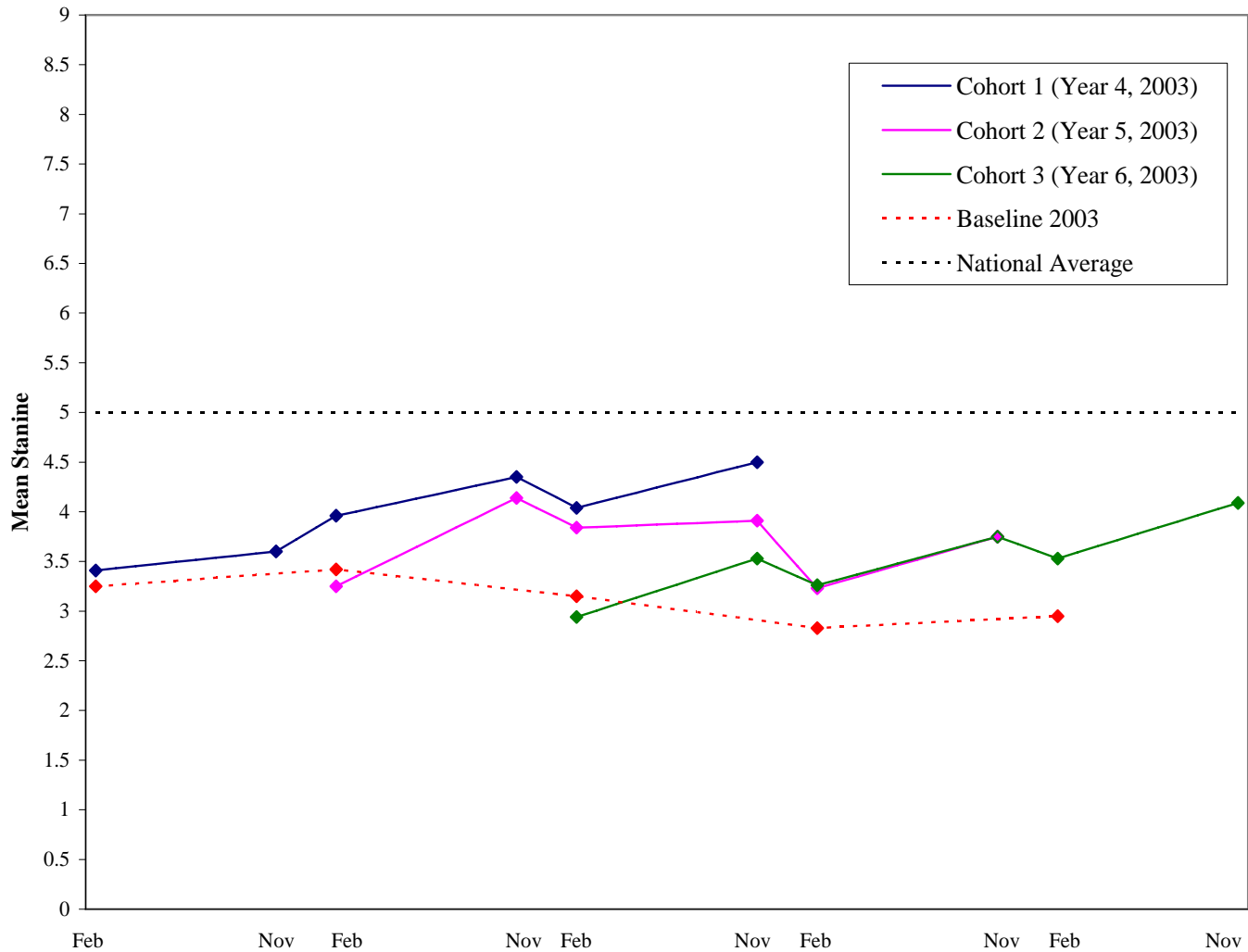
Schools limited by Out of School factors and limited coverage.

1. OSF disparities constrain
2. Schools effective while operating (eg Summer Learning Effect)
3. Strong evidence (with experimental)
4. Too much variability again (eg countries, clusters; transitions)

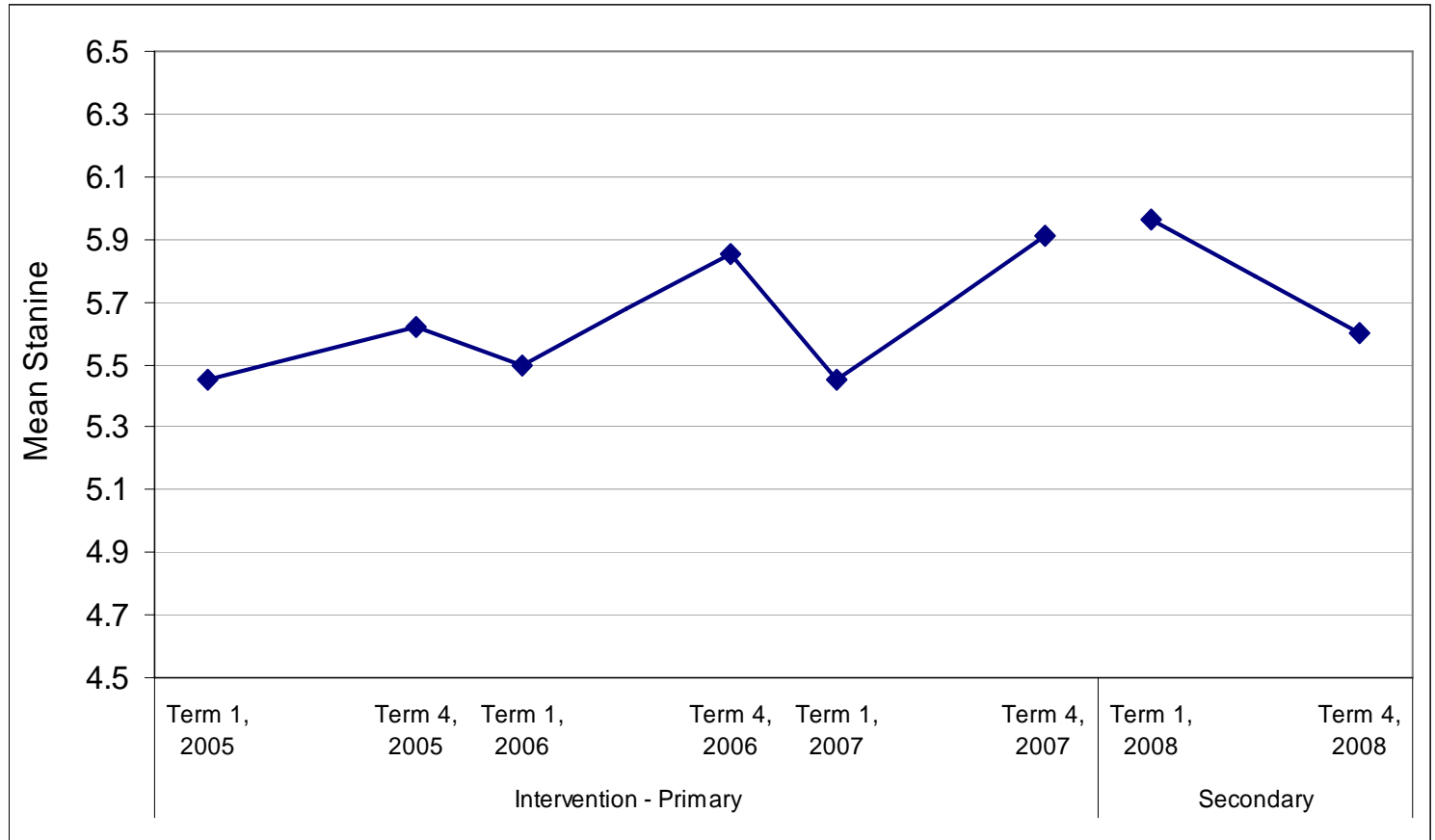
Educational Scores are Higher in More Equal Rich Countries



Cohorts against projected baseline: cluster A



P → S Transition in cluster C



Question of 'solving' SLE

- ❖ In US: Lengthen school day, school year
- ❖ In NZ: (shorter summer break, family practices) examining practices associated with variability in schools and families and what schools can solve

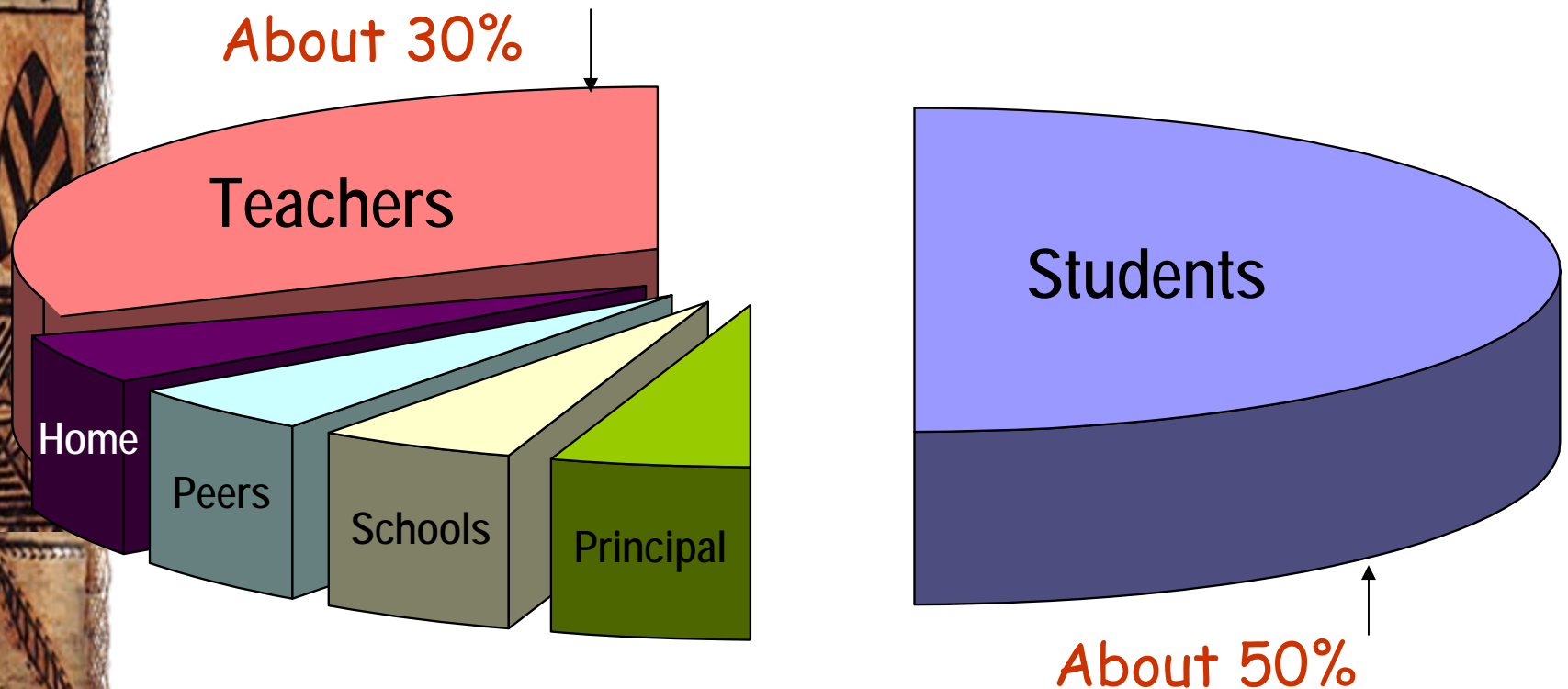


SLE conceived as OSFs illustrates a more general point

1. Out of school (out of site?) might mean out of mind?
2. Put family/ whanau part back with teaching part in our research programmes

Summary of sources of variance (from Hattie, 2008)

Percentage of Achievement Variance



Keep families / whanau in mind

Life span approach to family involvement-

1. Before school reading to children (largest effect sizes with combined programmes)
2. Early school reading with children (largest effect sizes with combined programmes)
3. Later school guidance & engagement
4. Relationships at high school

Explaining limits #4: more to discover

Yet to discover all that makes schools effective

- ❖ The optimistic position
- ❖ Impossible to disprove
- ❖ Multiple discrete studies may have limited transfer to the dynamic messiness of schools (not looking in all the right places)

Why limitations?

1. need better science
2. need better theories

A research agenda with 2 propositions:

1. If you want to know about something try and change it
2. If you want to change it you had better get a good theory

Being Better

Our science needs to solve real world problems

Our theories need to:

recognise the historical, embedded and contingent nature of phenomena

account for both constraints AND capability to change within constraints

Account for variability as well as central tendencies



In school change studies need integrated theorising (at least) about:

1. policy levers
2. communities of practice
3. teaching and instruction
4. leadership
5. domain learning and development
6. socio cultural practices in family/whanau and schools

Our science requires robust:

1. ...designs for everyday contexts (beyond “fools gold”)
2. ...analytic methods (which can learn from variability not treat it as error variance)
3. ...change methods
4. ...programming for replicability, sustainability and scalability



For example: what might sustainability of a school change process model mean ?

1. New cohorts students
2. New cohorts teachers / leaders
3. Developmental sustainability
4. New 'problems'

Learning Schools Model¹


Two major components in three phase implementation over three years

1. Professional learning communities engaged in systematic inquiry to solve achievement problems
2. Contextualised evidence (teaching and learning) to fine tune specific components of programme

¹(McNaughton & Lai, 2010)

Learning Schools Model some features:

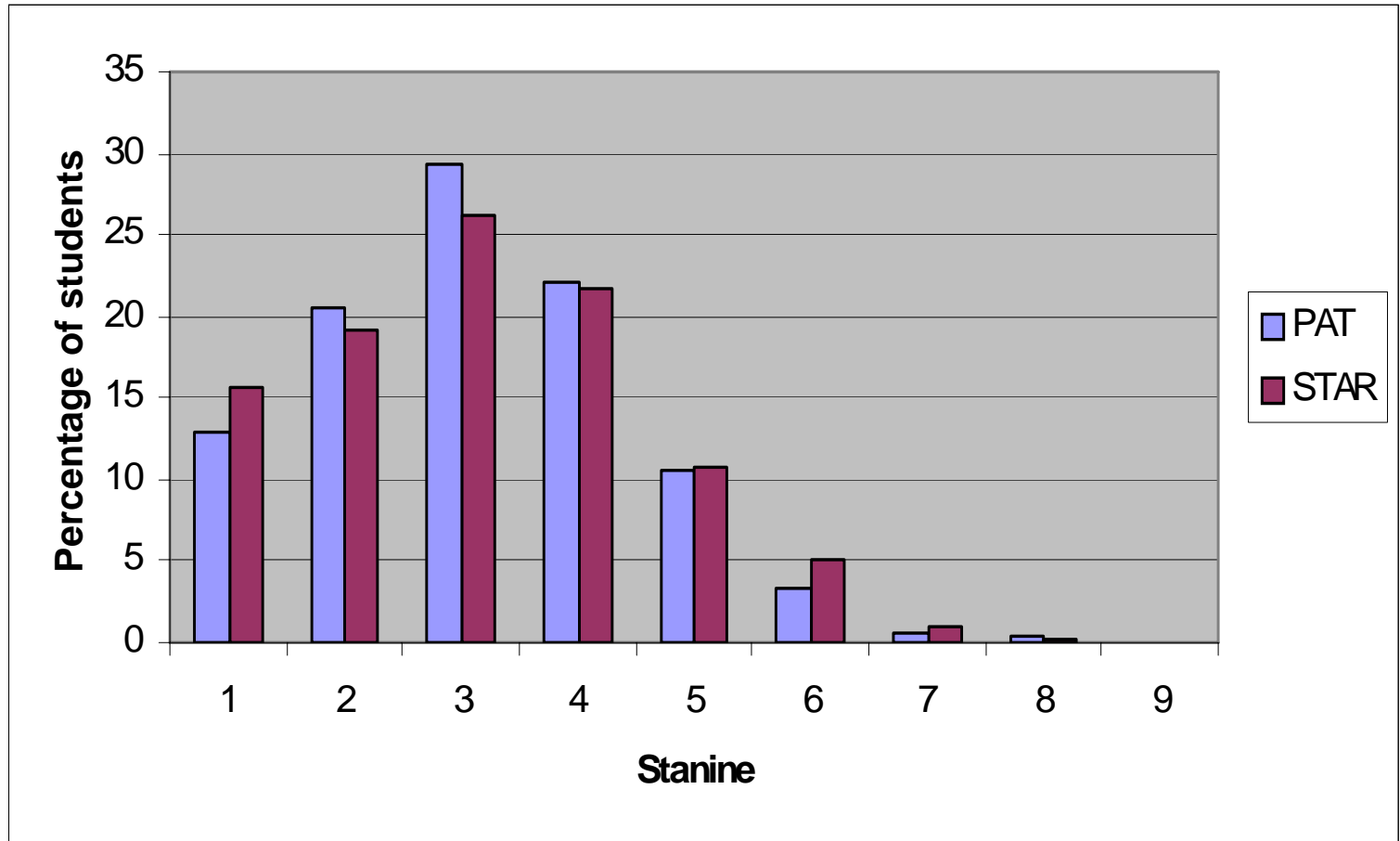
1. Research–practice-policy partnerships forming:
2. Professional learning communities in which:
3. Teachers are ‘adaptive experts’ with:
4. Instructional leadership leading:
5. Cycles of specific change process (resulting in specific fine tuning of programmes)

- 
1. Effectiveness with 3 clusters of primary schools (n=47)
 2. Ongoing work with secondary schools

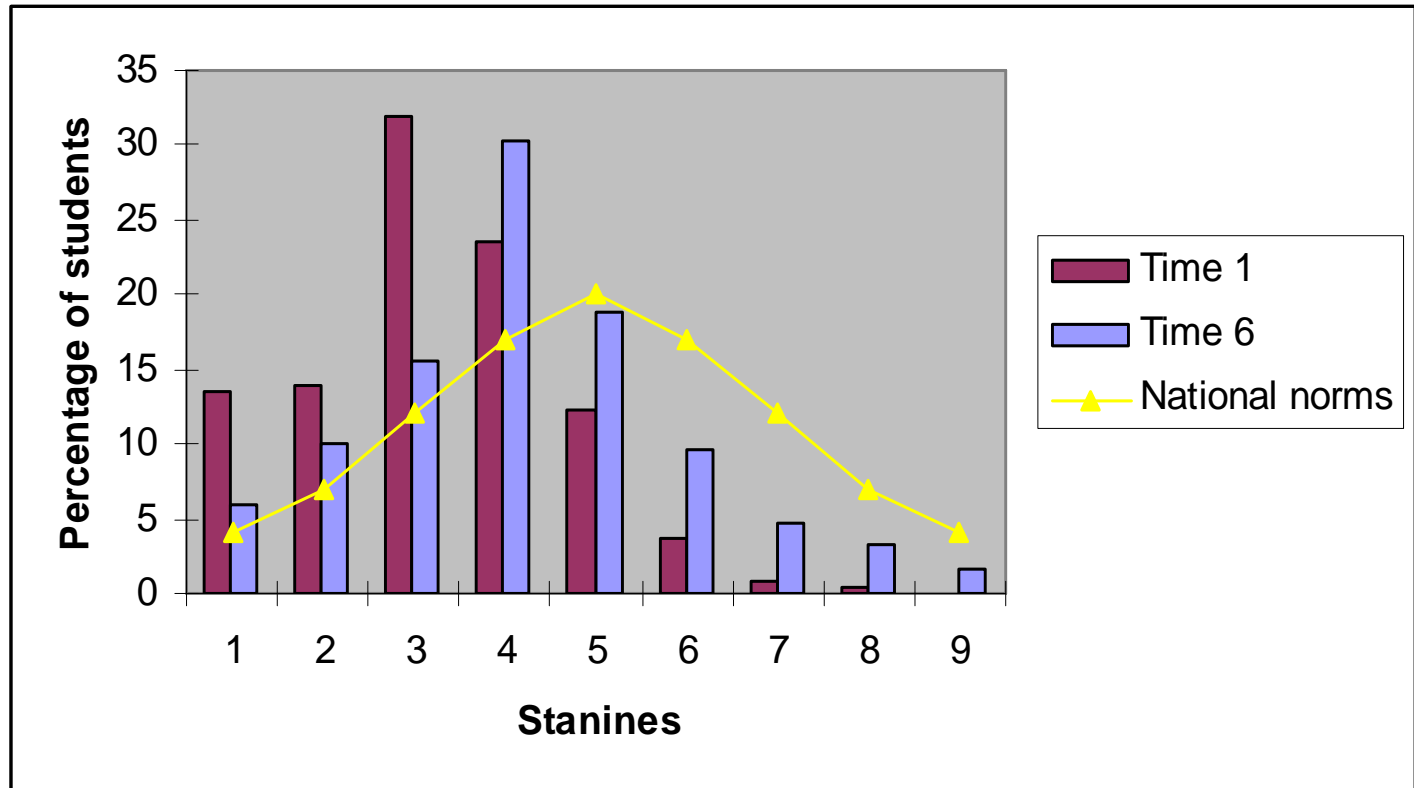
General results for reading comprehension in 'decile 1' schools and small town / rural

- ❖ Acceleration: Over 3 years about a years gain in addition to expected gain
- ❖ Matched distributions: close to (eg after 3 years 70% in average to upper bands of achievement)
- ❖ In small town, rural primary schools already at average levels: after 3 years 40% above average or outstanding (very high group Maori girls)

General profile of reading comprehension at T1 (cluster 1)



Student achievement: Stanine distribution for longitudinal cohorts against national norms- Cluster One



**Mean gain of 0.97 stanine
(mean level Dec.05 = 4.2)**

Final comment: Can we design better schools?

Three answers:

1. Yes, even more with better science
2. Yes, even more with better theories
3. BUT care about the inequalities that constrain us
 - Direct caring
 - Indirect caring

Can we design better schools?

Keeping in mind that:

“The basis for optimism is sheer terror.” **Oscar Wilde**

Closer to home

“There is no sadder sight than a young pessimist...

except an old optimist.” **Mark Twain**

Cautious optimism

Thank you from an old optimist

