Montessori Assessment: Can We Measure What We Treasure?

A discussion cheered by

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NCMPS Assessment Conversation

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Washington, DC

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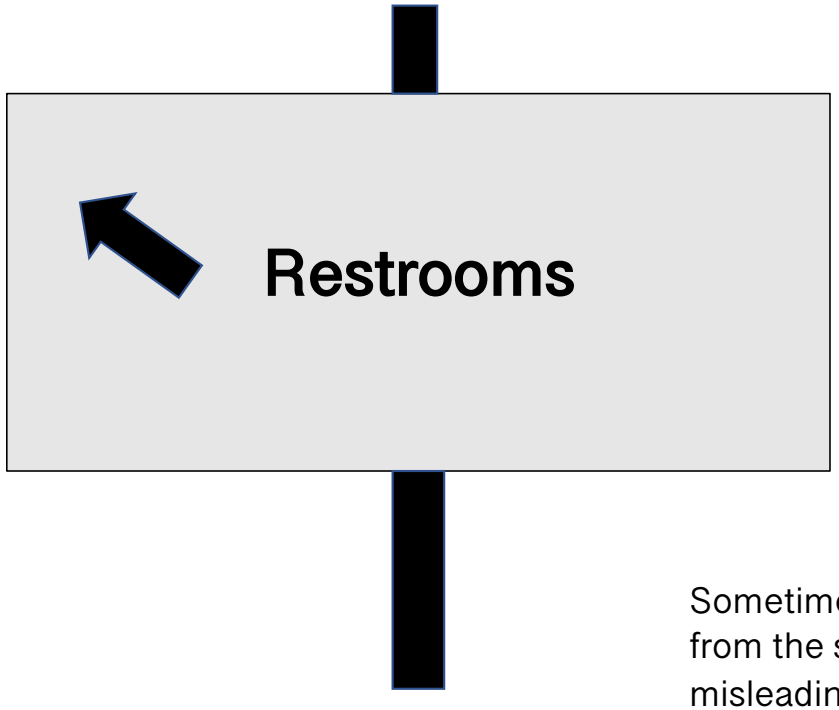
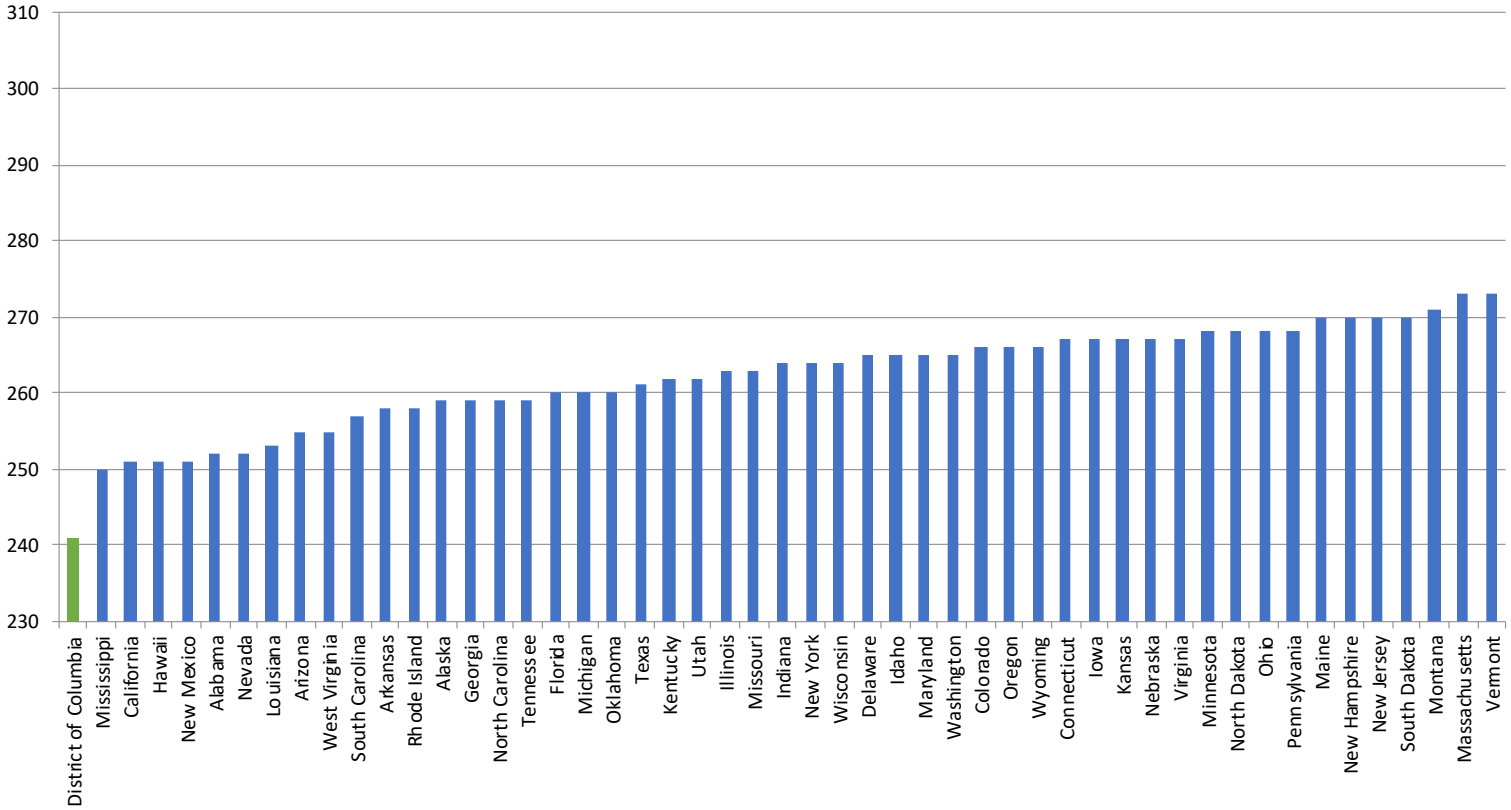
Which way to go?

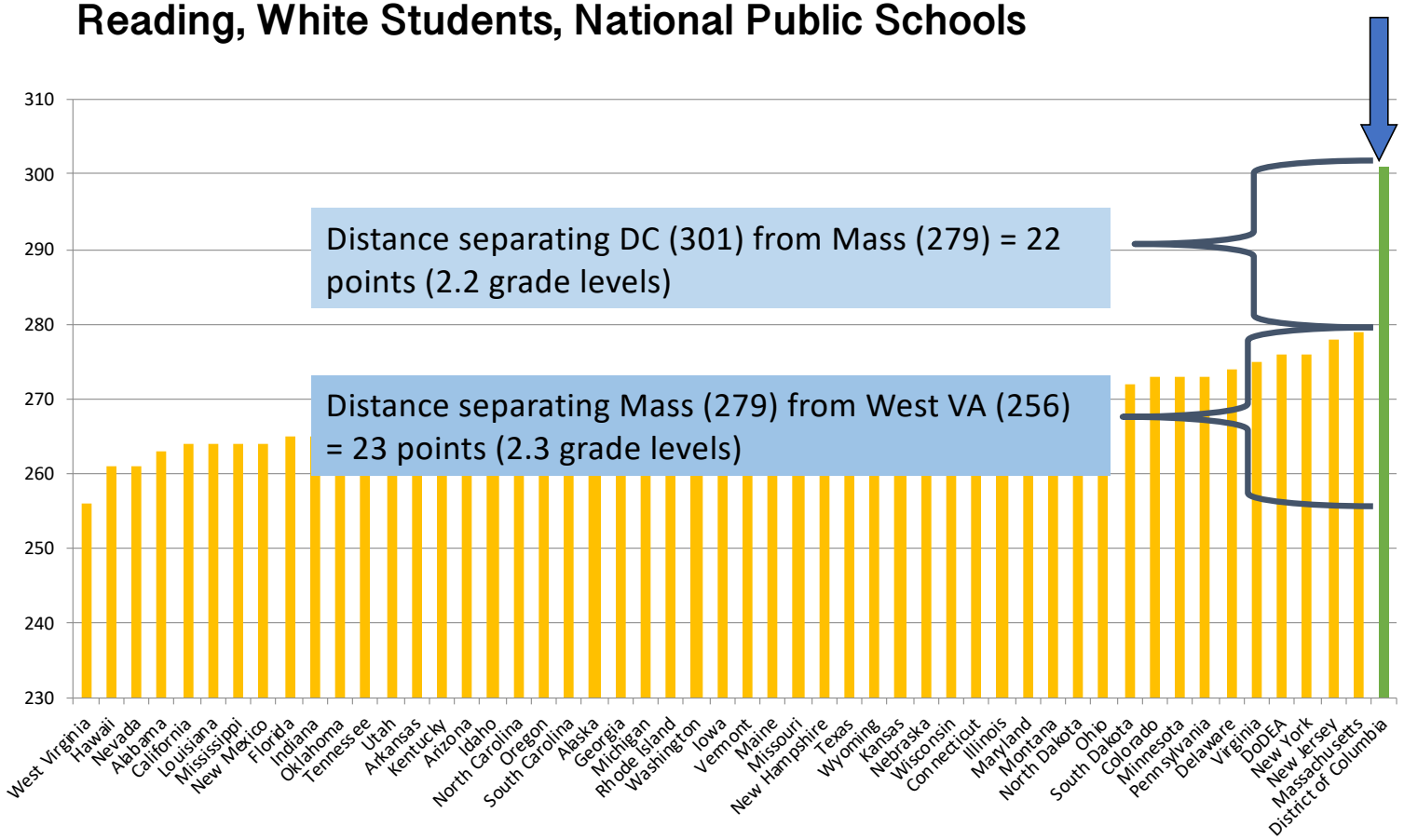


Sometimes, the signal from the system is misleading

2015 National Assessment of Educational Progress, Grade 8 Reading, National Public Schools



2015 National Assessment of Educational Progress, Grade 8 Reading, White Students, National Public Schools



International assessment outcomes

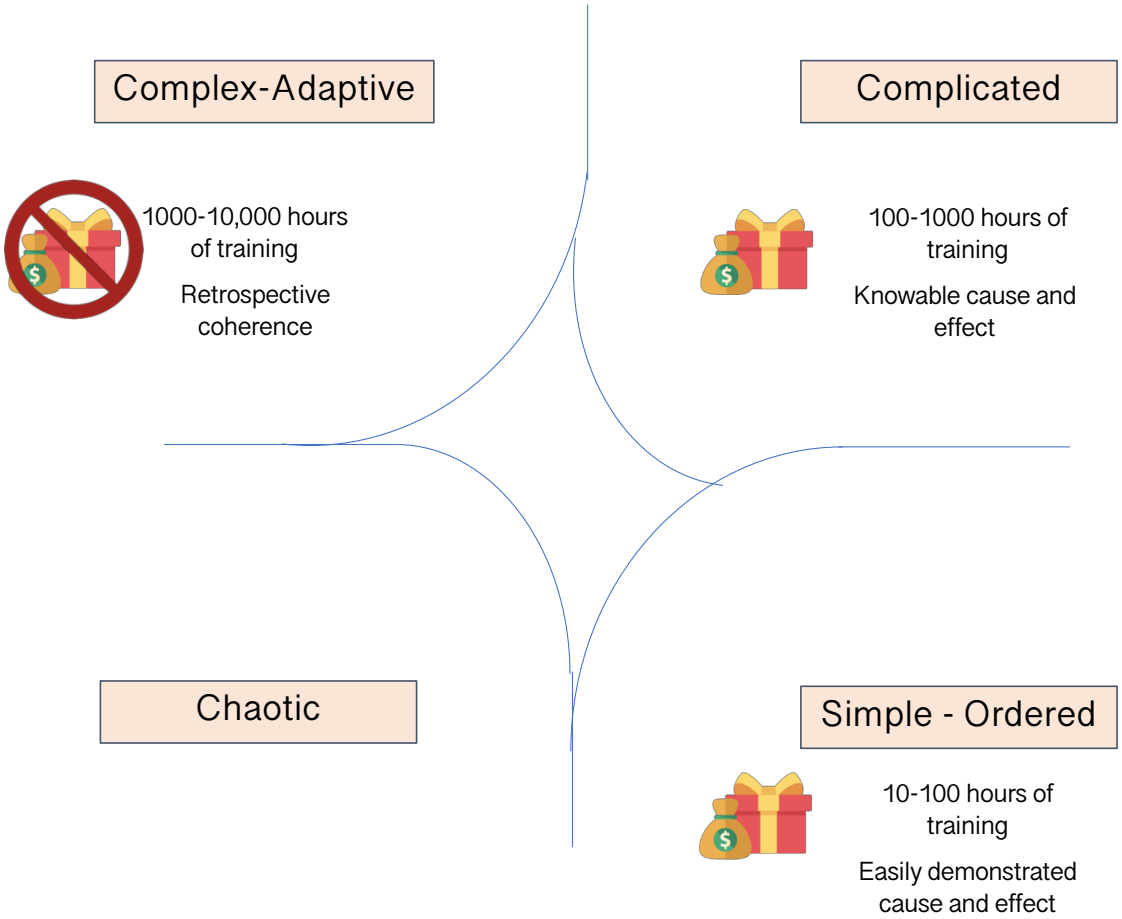
International assessment	Date of first administration
Programme for International Student Assessment (PISA)	2000
Progress in International Reading Literacy (PIRLS)	1995
Trends in International Mathematics and Science Study (TIMSS)	2001
Latin American Laboratory for Assessment of the Quality of Education (LLECE)	1997
Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ)	1995
Program on the Analysis of Education Systems (PASEC)	2008

PISA performance in major areas of focus

The Programme for International Student Assessment (PISA) is a worldwide evaluation of 15-year-old school children's scholastic performance, performed first in 2000 and repeated every three years. It is coordinated by the Organisation for Economic Co-operation and Development (OECD), with a view to improving educational policies and outcomes.

2000		2003		2006	
Reading literacy		Mathematics		Science	
1.	[illegible] 546	1.	[illegible] 544	1.	Finland 563
2.	Canada 534	2.	South Korea 542	2.	Canada 534
3.	New Zealand 529	3.	Netherlands 538	3.	Japan 531
4.	Australia 528	4.	Japan 534	4.	New Zealand 530
5.	Ireland 527	5.	Canada 532	5.	Australia 527
6.	South Korea 525	6.	Belgium 529	6.	Netherlands 525
7.	United Kingdom 523	7.	Switzerland 527	7.	South Korea 522
8.	Japan 522	8.	Australia 524	8.	Germany 516
9.	Sweden 516	9.	New Zealand 523	9.	United Kingdom 515
10.	Austria 507	10.	Czech Republic 516	10.	Czech Republic 513
11.	Belgium 507	11.	Iceland 515	11.	Switzerland 512
12.	Iceland 507	12.	Denmark 514	12.	Austria 511
13.	Norway 505	13.	France 511	13.	Belgium 510
14.	France 505	14.	Sweden 503	14.	Ireland 508
15.	United States 504	15.	Austria 506	15.	Hungary 504
16.	Denmark 497	16.	Germany 503	16.	Sweden 503
17.	Switzerland 494	17.	Ireland 503	17.	Poland 498
18.	Spain 493	18.	Slovakia 498	18.	Denmark 496
19.	Czech Republic 492	19.	Norway 495	19.	France 495
20.	Italy 487	20.	Luxembourg 493	20.	Iceland 491
21.	Germany 484	21.	Poland 490	21.	United States 489
22.	Hungary 480	22.	Hungary 490	22.	Slovakia 488
23.	Poland 479	23.	Spain 485	23.	Spain 488
24.	Greece 474	24.	United States 483	24.	Norway 487
25.	Portugal 470	25.	Italy 466	25.	Luxembourg 486
26.	Luxembourg 441	26.	Portugal 466	26.	Italy 475
27.	Mexico 422	27.	Greece 445	27.	Portugal 474
		28.	Turkey 423	28.	Greece 473
		29.	Mexico 385	29.	Turkey 424

Why I like Montessori…



CYNEFIN FRAMEWORK

Understanding system type to better match management style to systemic challenges

Con

100

RAMEWORK

system type to
anagement
ic challenges

training

Easily demonstrated
cause and effect

Complex-Adaptive

1000-10,000 hours of training

Retrospective coherence

Complicated

100-1000 hours of training

Knowable cause and effect

CYNEFIN FRAMEWORK

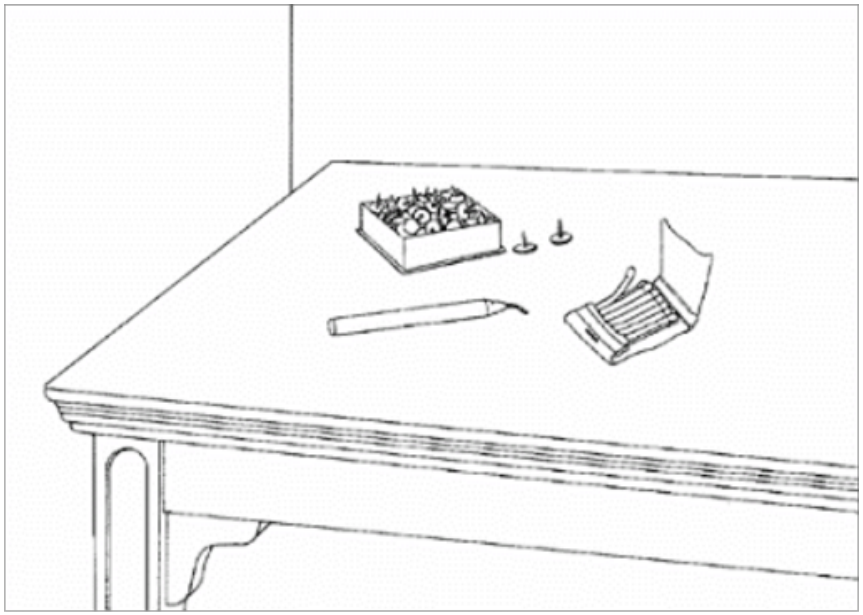
Understanding system type to better match management style to systemic challenges

Chaotic

Simple - Ordered

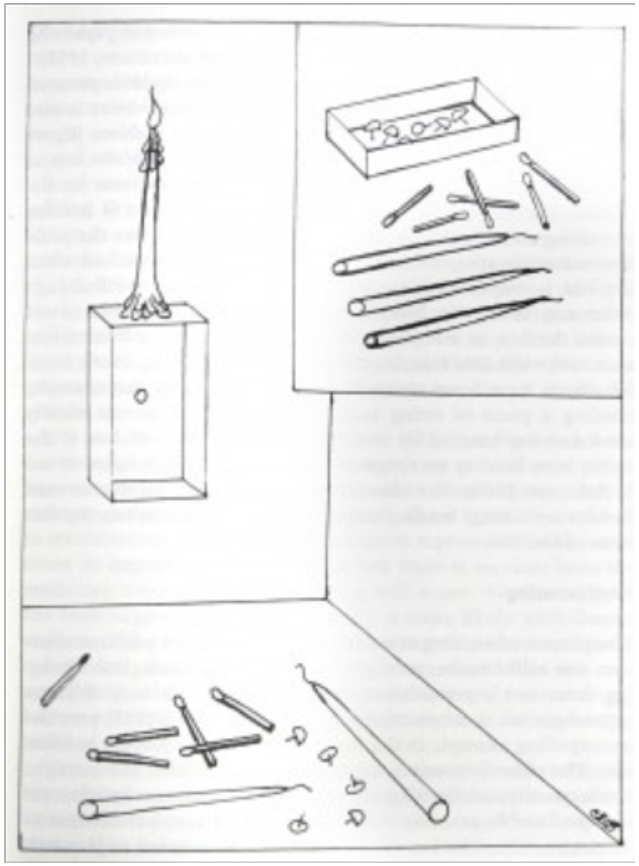
10-100 hours of training

Easily demonstrated cause and effect



INSIGHTS ON PERFORMANCE

- Dan Pink, *Drive*
- Karl Duncker, 1945
  Candle Problem



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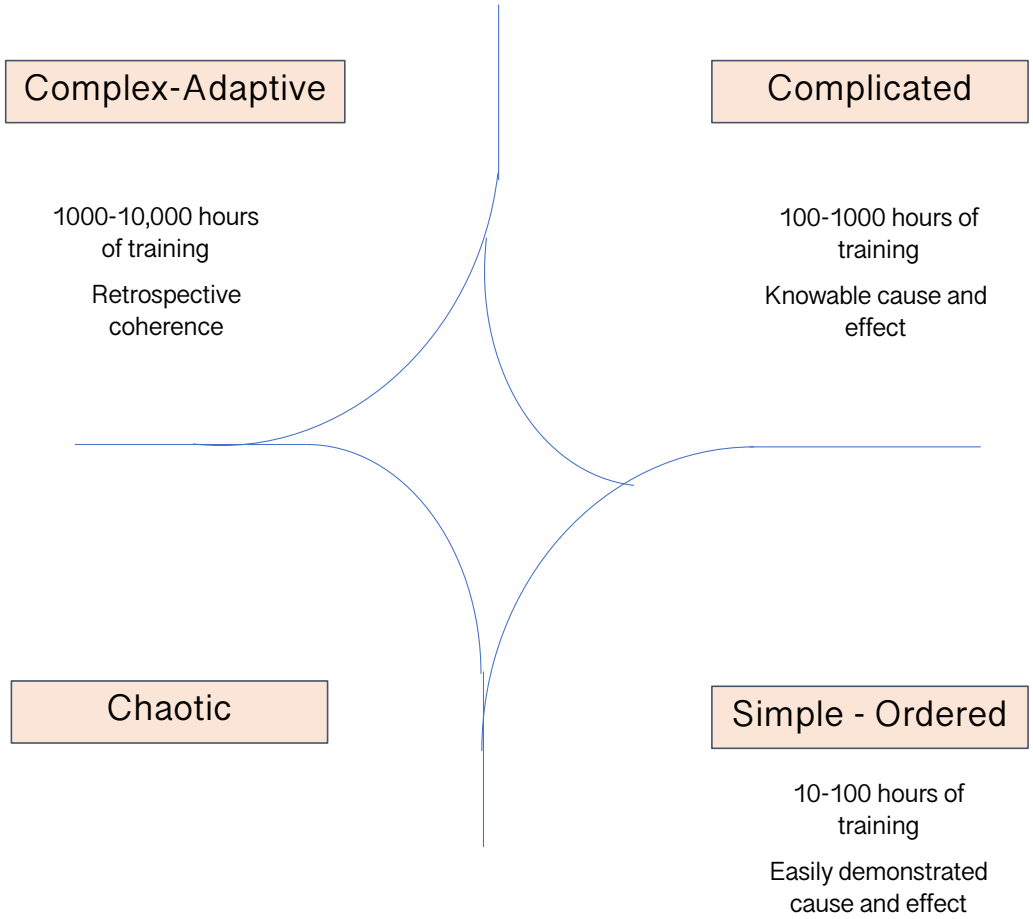


CYNEFIN FRAMEWORK

Understanding system type to better match management style to systemic challenges

So What?

Singapore	vs.	Jakarta
CAS		Complicated

Managing for complexity

https://www.youtube.com/watch?v=Miwb92eZaJg

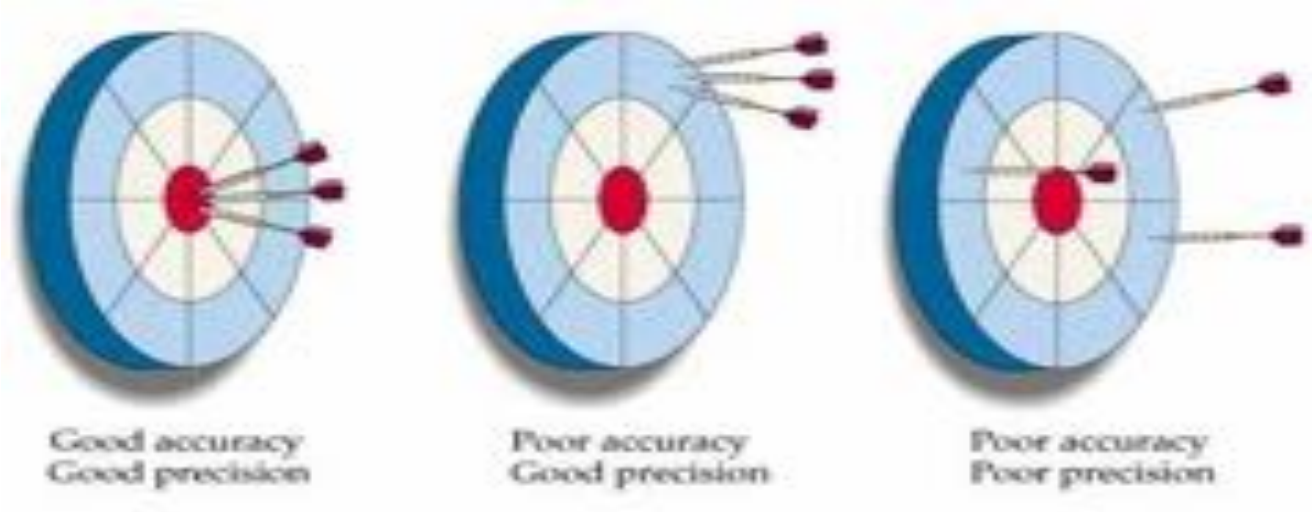
Montessori growth rates, particularly in the early grades, seems low to average when compared with other schools

Katie

How do test-developers know their tool is valuable?

VALIDITY

RELIABILITY



How do test-developers know their tool is valuable?

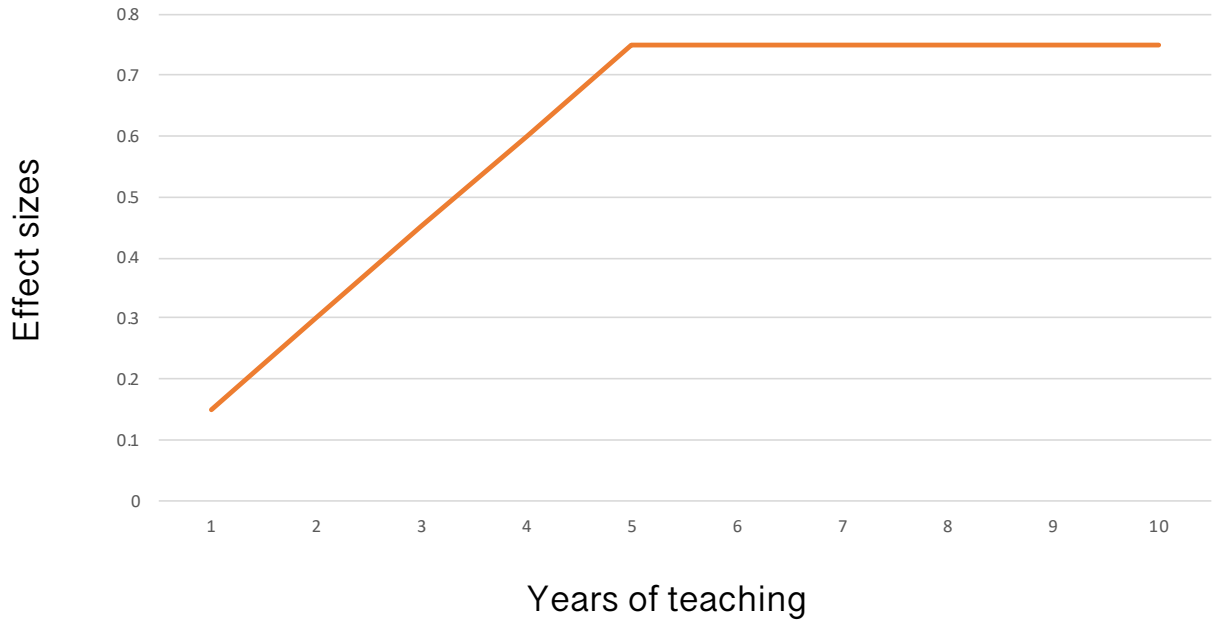
VALIDITY	RELIABILITY
Content validity	Test-retest
Construct validity	Inter-rater
Criterion or predictive validity	
Purpose alignment validity	

Possible explanatory hypotheses

Hypothesis 1	Hypothesis 2	Hypothesis 3	Hypothesis 4	Hypothesis 5
Montessori students could be performing worse	Montessori populations could be substantively different	The standards vary too much	The learning progressions are misaligned	Students are tested in unfamiliar formats; mode difference

Working slides

Teachers' ability to affect student learning outcomes over time

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