

# Problem-Driven Iterative Adaptation (PDIA) and Education System Reform

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# Outcomes = Sound Policy + Effective Implementation

- Effectiveness debates dominated by efficacy of ‘policy’, ‘programs’
  - If it ‘works’, must be a function of its design characteristics
  - So we need to “get design right”, then replicate, expand, scale-up
- But no matter what the policy is, it has to be implemented
  - **Can the designated organization actually do this?**
  - **If it can’t, how might it acquire the capability to do so?**
- In education, two big challenges:
  - **Policies (largely) designed and assessed on provision of observable inputs**
    - Enrollments, attendance, graduation, qualification, seniority
  - **Scaling-up ‘success’ (largely) enacted by compliance, mimicry**
    - Adopt/comply with ‘best practices’, ‘proven interventions’, ‘guidelines’

# Some historical ‘stylized facts’

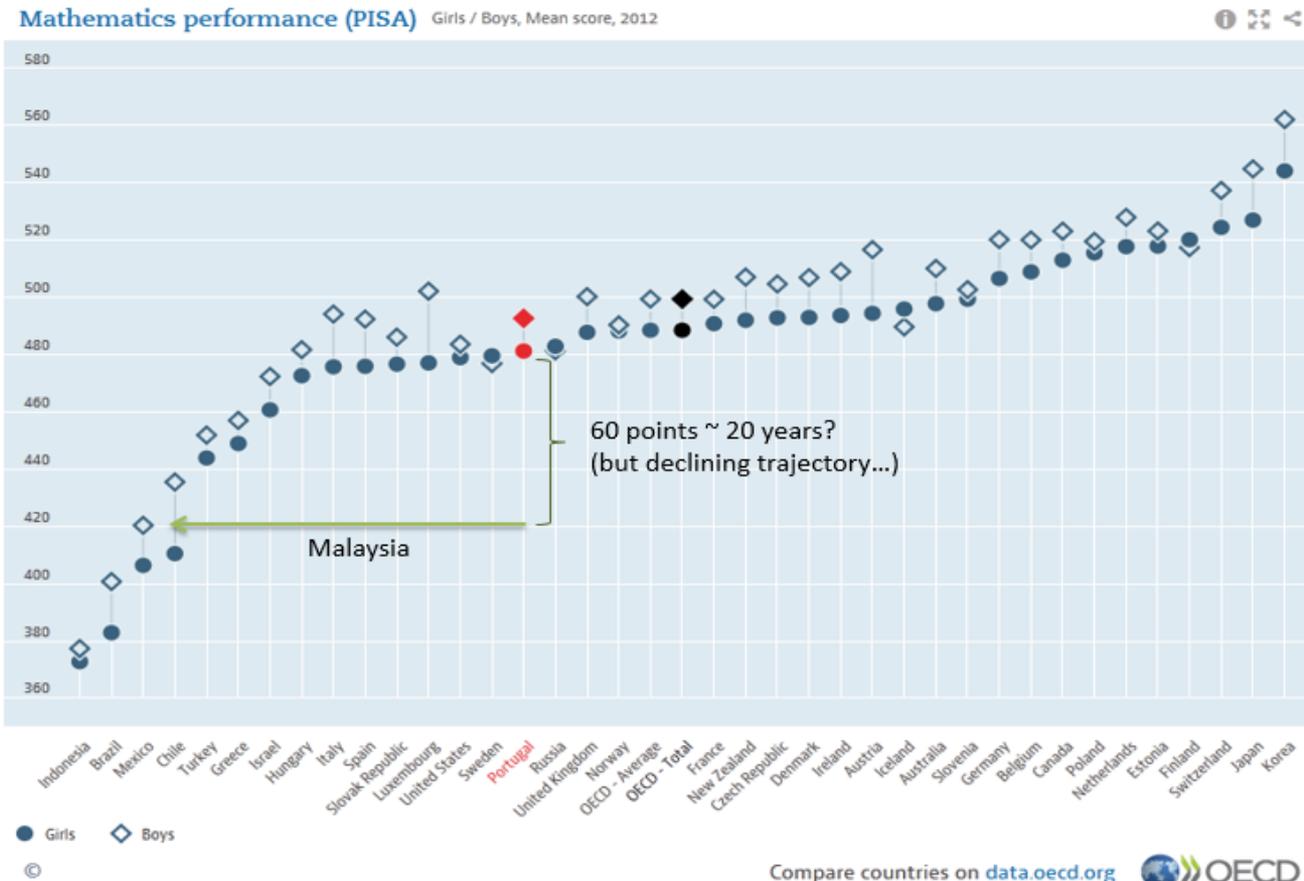
- Education performance in OECD countries today roughly similar, despite wide variation in how it is provided, funded
- Public education systems in today’s OECD countries enacted *after*, not before, functional literacy had been widely attained (Weber 1976, Vincent 2011)
  - State systems emerge in late 19<sup>th</sup> C as part of nationalist modernization agendas to ensure coherence, quality control, and unity/pride/loyalty
  - But built on, consolidated (highly variable) pre-existing ‘organic’ systems
- In pre- and especially post-colonial moment for today’s developing countries, however, prevailing ‘organic’ (or ‘folk’) education systems discredited as ‘backward’, ‘non-modern’; overtly dismantled
  - Ascent of ‘bureaucratic high modernism’ (Scott 1998)
    - Not just in education, but agriculture, forestry, town planning, etc

## Ki Hajar Dewantara

(Indonesian educator, 1935)

We have added much new cultural material, the value of which cannot be discounted; however, **it often fits so ill with our own style or is so far removed from it that we can use it at best as a decoration and not as material to build with.** It is quite understandable why we have been so mistaken in our choice. In the first place, much has to be chosen, and there has been **so little to choose from.**

# Education in OECD: similar function, variable form

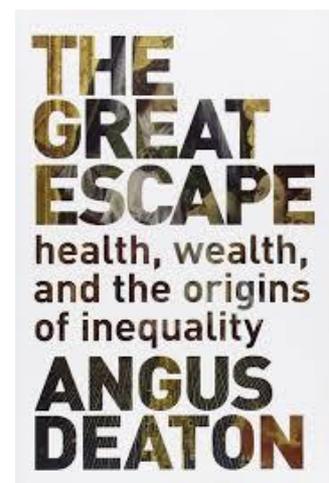
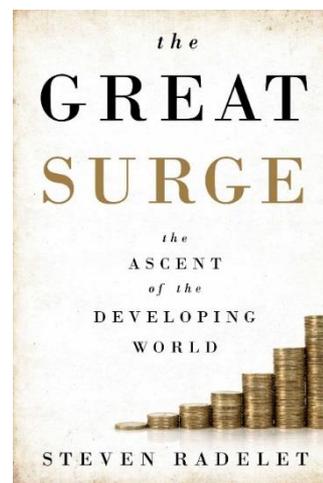
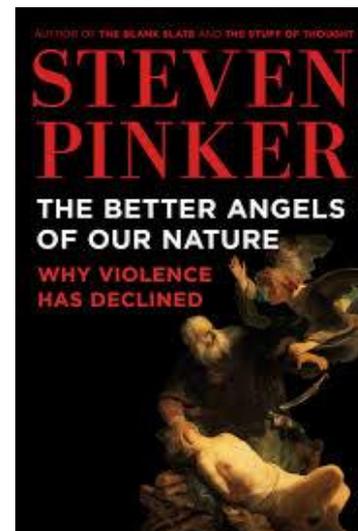
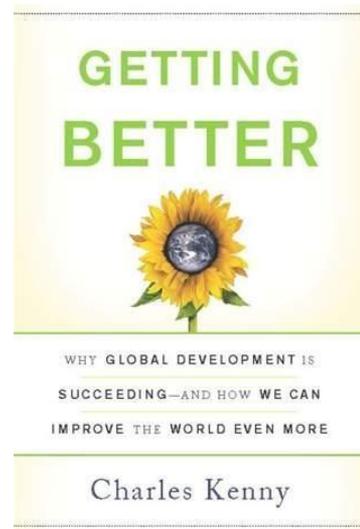


## Legacy today: Low capability, low legitimacy, states

- **That are asked to do the impossible** ('pre-mature loading bearing')...
  - "Too much asked of too little, too soon, too often"
- **...but, to ensure the flow of aid and convey some semblance of credibility...**
- **...they 'reform' by *looking like* an effective state** ('isomorphic mimicry')
  - i.e., alter form (what they look like), not function (what they can actually do)
  - Measure success by compliance obtained, inputs provided, 'best practices' adopted
- **But thereby find themselves stuck in a 'capability trap', which perpetuates cynicism, and virtually assures subsequent failure**
- Especially vexing for those sectors, like education, where effective delivery, at scale, requires integration of information/knowledge that is both:
  - 'Thin': readily measurable, visible, non-controversial (enrollments, buildings, seniority)
  - 'Thick': context-specific, idiosyncratic (student-teacher interactions, community ties)

‘Getting better’, certainly.  
Now for the hard part...

- The world has never been in better shape, which is great...
- ..but now for the hard part.
- ‘Thin’ and ‘technocratic’ development problems mostly solved (or solve-able)
  - Infrastructure, logistics, Central Banks
- Looming challenges thick with ‘thick’
  - Regulation, justice, taxation, gender
  - **Learning**



But state capability is stagnant, declining

- ...in 'historically developing countries', whether assessed:
  - Cross-nationally
    - Of citizens in today's LICs, at current trends only 10% will have descendants who will live in a high capability country by the end of the 21<sup>st</sup> C (Andrews, Pritchett and Woolcock, forthcoming)
  - Experimentally
  - Sectorally (education; but with notable exceptions: e.g., Vietnam, China)
    - And strong isomorphic pressures to copy the 'form' of 'success stories' elsewhere

Only the 13 'historically developing countries' (in green) are on a plausible path to strong capability by the end of the 21<sup>st</sup> century.

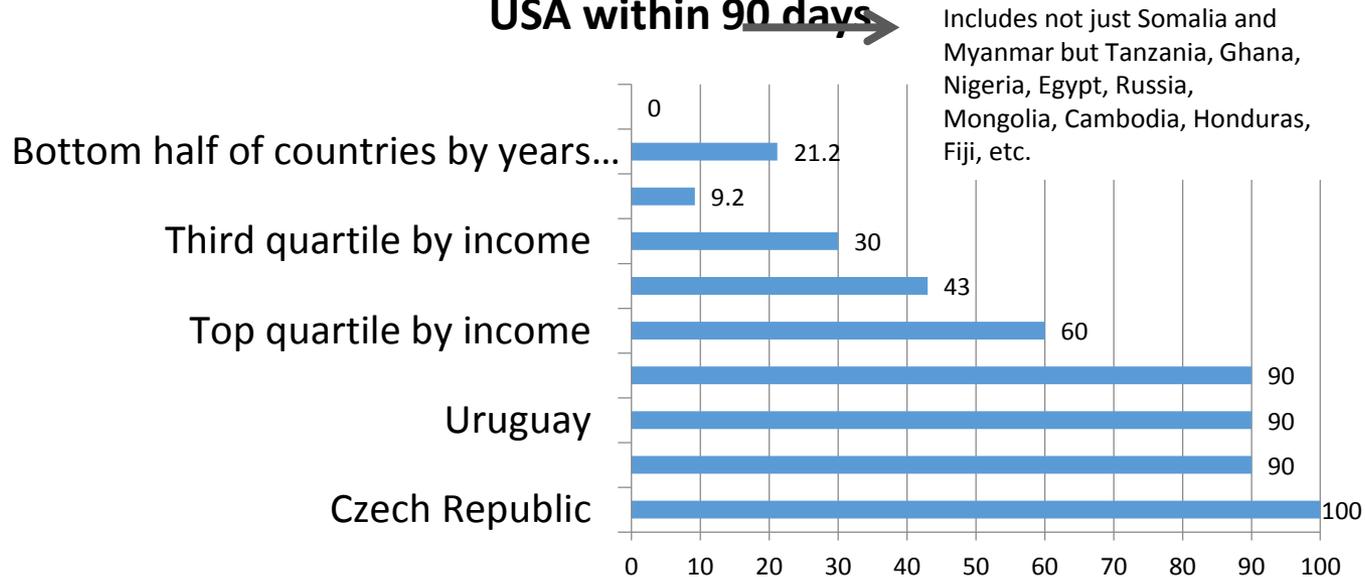
	Rapid negative (g<-.05)	Slow		Rapid positive (g>.05)
		Negative (-.05<g<0)	Positive (0<g<05)	
Strong (SC>6.5)		BHR, BHS, BRN	CHL(0), SGP(0), KOR(0), QAT(0)	ARE(0)
8	0	3	4	1
Middle (4<SC<6.5)	MDA, GUY, IRN, PHL, LKA, MNG, ZAF, MAR, THA, NAM, TTO, ARG, CRI	PER, EGY, CHN, MEX, LBN, VNM, BRA, IND, JAM, SUR, PAN, CUB, TUN, JOR, OMN, MYS, KWT, ISR	KAZ(10820), GHA(4632), UKR(1216), ARM(1062), RUS(231), BWA(102), <b>IDN(68), COL(56), TUR(55), DZA(55), ALB(42), SAU(28), URY(10), HRV(1)</b>	
45	13	18	14	0
Weak (2.5<SC<4)	GIN, VEN, MDG, LBY, PNG, KEN, NIC, GTM, SYR, DOM, PRY, SEN, GMB, BLR	MLI, CMR, MOZ, BFA, HND, ECU, BOL, PAK, MWI, GAB, AZE, SLV	UGA(6001), AGO(2738), TZA(371), BGD(244), ETH(103), ZMB(96)	
32	14	12	6	0
Very weak (SC<2.5)	YEM, ZWE, CIV	SOM, HTI, PRK, NGA, COG, TGO, MMR	SDN(7270), SLE(333), ZAR(230), IRQ(92)	NER(66), GNB(61), LBR(33)
17	3	7	4	3
102	30	40	28	4

Source: Authors' calculations of state capability from Quality of Government, Failed State Index, and World Governance indicators (Data Appendix 1.1).

# The unhappy state of state capability (2)

## Testing the post office in 157 countries

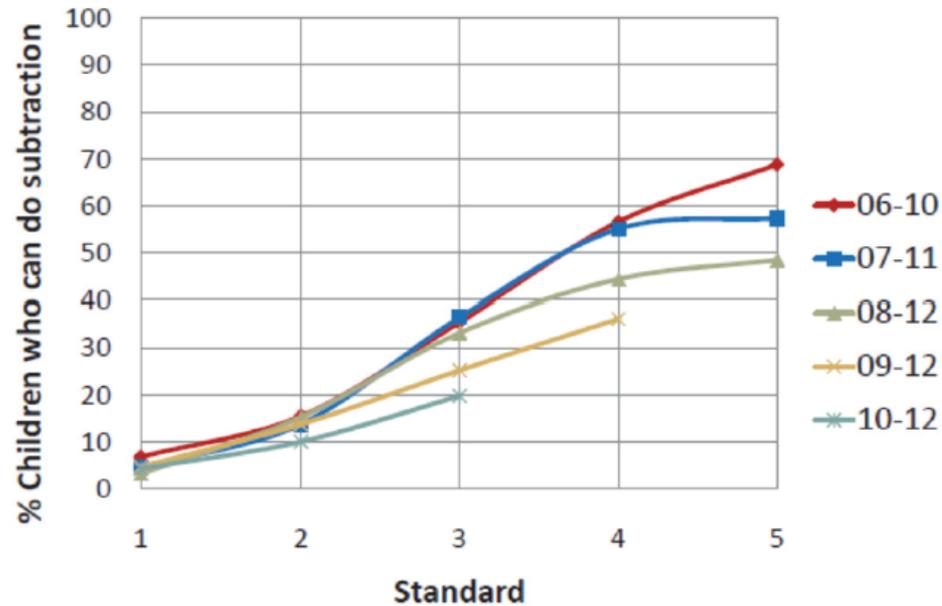
Percent of 10 misaddressed letters coming back to  
USA within 90 days →



Source: Chong, et al (2014)

# Declining capability (3): In education in India

Figure 1: All India: % children who can do a 2 digit subtraction: successive cohorts



Note: Each successive cohort of children in India is less likely to be able to do simple subtraction at the same grade—standard 4 children are almost 20 percentage points less likely to be able to do subtraction in 2012 than standard 4 children in 2009

Source: ASER 2013 report.

# What to do?

- Problem-Driven Iterative Adaptation (PDIA) as part of, not a substitute for, building state capability
  - Especially for engaging with ‘thick’, ‘adaptive’ problems
  - Which are legion, looming, lasting (i.e., *never* ‘QED solved’)

# What is PDIA?

Four principles:

1. Local Solutions for Local Problems
2. Pushing Problem Driven Positive Deviance
3. Try, Learn, Iterate, Adapt
4. Scale Learning through Diffusion

See: Matt Andrews, Lant Pritchett and Michael Woolcock (2013) 'Escaping capability traps through Problem-Driven Iterative Adaptation (PDIA)' *World Development* 51(11)

# How does PDIA differ?

	“Big D” (e.g. WB, agencies)	“small d” (e.g. NGOs)	PDIA
What drives action?	<b>Pre-determined solutions</b> (“institutional mono-cropping”, “best practice”), <b>more inputs</b>	<b>Niche, parallel solutions</b> (via variety of antidotes – e.g. “participation” “community driven”)	<b>Problem-Driven:</b> looking to solve particular problems, locally nominated and prioritized
Planning for action?	Lots of <b>advance planning</b> (implementation of secondary importance)	<b>Boutique;</b> starting very small with no plans for scale	<b>Assuring authorizing environment</b> promoting positive deviation, purposive crawl of the design space
Feedback loops?	<b>Monitoring</b> (short, on financing, compliance, inputs) <b>and Evaluation</b> (long feedback loop on outputs, maybe outcomes)	<b>Casual;</b> geared to advocacy not systemic learning	<b>MeE:</b> integration of rigorous “experiential” learning into tight feedback loops
Scale?	<b>Top-down:</b> the head learns, implementation is just muscle (“political will”)	<b>Small is beautiful...</b> Or, just not logistically possible	<b>Diffusion of feasible practice</b> across organizations and communities of practitioners

# PDIA in action, in education, analytically (1)

- MENA Report on Service Delivery (2015)
  - *Trust, Voice and Incentives: Learning from Local Success* (Brixi, Lust, Woolcock 2015)
- MENA states highly centralized; singular national policies on all inputs, but wide sub-national variation in implementation
  - In inputs themselves (attendance, provision of supplies)
  - And outcomes (performance)
- Creative use of *national* PISA, TIMMS data to map (imperfect) sub-national state of education
  - As a basis for a domestic policy dialogue on where/how improvement might come
  - “Someone, somewhere, somehow has figured out how to do things better”
- Complement ‘breadth’ (TIMMS data) with ‘depth’ (via case studies)
  - E.g, High school in Jenin, West Bank
  - <http://www.worldbank.org/en/news/video/2015/05/21/what-makes-this-palestinian-school-a-top-reformer>

# Trust, Voice, and Incentives

*Learning from Local Success Stories  
in Service Delivery in the Middle  
East and North Africa*

Hana Brix, Ellen Lust,  
and Michael Woolcock



## PDIA in action, in education, operationally (2)

- **India** (Pritchett 2013, 2014)
  - Right to Free and Compulsory Education Act (2009): ‘Norms and standards’ (thus accreditation, funding) measured by:
    - Teacher:Enrollment ratio
    - Building;
    - Working Days / Instructional Hours
    - Minimum Working Hours
    - Learning Equipment
    - Library
    - Play Equipment (Quality = criteria met)
  - District Information System for Education (DISE) 2011/12 Report Card
    - “...of the 817 pieces of information not a single one could be construed as a direct measure of learning of any kind.”
  - SDGs (‘learning’) as hopeful advance on MDGs (‘butts on seats’)

## PDIA in action, in education, operationally (2)

- Pratham's 'Teaching at the Right Level' program (Banerji 2015)
  - Prevailing system: students to new grade level each year, no matter what they demonstrably know; teachers teach textbook, no matter what...
  - Low student attendance because students couldn't follow basic content
  - Focus in particular on years 3, 4 and 5 (after this, "too late")
- "Children who never came regularly to school before are coming now. Children who could not do anything earlier, are able to do so much. Look at this child", [the official] said with shining eyes, "ten days ago she could not even recognize words and today she wants to write her favourite word! We have achieved more in 10 days than in 5 years! How is all this happening?" I looked out of the window at the sea of rice fields. It was almost like we were in a ship with rice waves lapping at our hull. "There is nothing here" I said, "Nothing except for you. It is you – you have made the children able and now they are learning".
- "There are no silver bullets. But there are wars."

# Further reading

- Andrews, Matt, Lant Pritchett and Michael Woolcock (2013) 'Escaping capability traps using Problem-Driven Iterative Adaptation' *World Development* 51(11): 234-244
  - See also: <http://bsc.cid.harvard.edu/>
- Banerji, Rukmini (2015) 'How do systems respond to disruptive pedagogic innovations? The case of Pratham in Bihar' RISE Working Paper 15/02
- Brixi, Hana, Ellen Lust and Michael Woolcock (2015) *Trust, Voice and Incentives: Learning from Local Success Stories in Service Delivery in the Middle East and North Africa* (Washington, DC: World Bank)
- Pritchett, Lant (2013) *The Rebirth of Education: Schooling Ain't Learning* (Washington: Center for Global Development)
- Pritchett, Lant (2014) 'The risks to education from design mismatch and global isomorphism' UNU-WIDER Working Paper No. 2014/039

# Main messages

- Development outcomes = ‘sound policy’ + effective implementation
- But implementation capability around the world is dismal (will briefly document)
- Why? Because too often reform’s assess change in form (what systems look like), not function (what they can actually do)
- Education is an especially vexing sector to ‘reform’ because it has no technocratic ‘fix’ (India, Malaysia, US, elsewhere); requires both ‘thin’ and ‘thick’ knowledge
- PDIA is one strategy for engaging with complex implementation challenges
- What PDIA is, how it differs from orthodoxy; quick examples
- Examples of attempts, so far, to enhance learning using a PDIA approach
- Still early days; jury must still be out on PDIA. But growing interest, and “more of the same” won’t get us where we need to go
- (Something like) PDIA as a complement to, not substitute for, a coherent development strategy for building implementation capability