

High impact on outcomes Quick wins Must haves Commitment to universal achievement Capacity Resources at point of delivery where they yield most Gateways, instructional systems Coherence A learning system Low feasibility Incentive structures and accountability Low hanging fruits

essons from high performers

High impact on outcomes

A commitment to education and the belief that competencies can be learned and therefore all children can achieve

- Universal educational standards and personalization as the approach to heterogeneity in the student body...
- ... as opposed to a belief that students have different destinations to be met with different expectations, and selection/stratification as the approach to heterogeneity
- Clear articulation who is responsible for ensuring student success and to whom

incentive structures and accountability

Low hanging fruits

vins

structional

ms

Countries where students have stronger beliefs in their abilities perform better in mathematics Fig III.4.5 Shanghai-China



Motivation to learn mathematics

Fig III.3.9



%

Students and perseverance Fig III.3.2 26 Percentage of students who reported that the following statements describe someone "very much like me" or "mostly like me" (*) or "not much like me" or "not at all like me" (**) New Zealand Japan Agree: I continue working on tasks until everything is perfect Agree: I remain interested in the tasks that I start **Disagree: I put off difficult problems** Disagree: When confronted with a problem, I give up easily

10

0

20

30

40

50

60

Students who enjoy learning mathematics perform better

Fig III.3.13





The parent factor

Students whose **parents have high educational expectations for them** tend to report more perseverance, greater intrinsic motivation to learn mathematics, and more confidence in their own ability to solve mathematics problems than students of similar background and academic performance, whose parents hold less ambitious expectations for them.

Parents' expectations for their child have a strong influence on students' behaviour towards school

Fig III.6.11

Percentage-point change in arriving late for school that is associated with parents expecting the child to complete a university degree



Parents' high expectations can nurture students' enjoyment in learning mathematics

Fig III.6.11

Change in the index of intrinsic motivation to learn mathematics that is associated with parents expecting the child to complete a university degree





High impact on outcomes **Quick wins** Must haves Clear ambitious goals that are shared across the Capa system and aligned with high stakes gateways and at point o instructional systems Well established delivery chain through which curricular goals translate into instructional systems, instructional practices and student learning (intended, Coher implemented and achieved) High level of metacognitive content of instruction ... Low feasibility Incentive structures and accountability Low hanging fruits

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Low impact on outcomes

	High impact on outcomes
Са	apacity at the point of delivery
•	Attracting, developing and retaining high quality teachers and school leaders and a work organisation in which they can use their potential
•	Instructional leadership and human resource management in schools
•	Keeping teaching an attractive profession
	System-wide career development FIN ystems
h m	A learning system
s fro	Low feasibility High feasibility
Lesson	Incentive structures and accountability
	Money pits Low hanging fruits

Teacher shortage



Fig IV.3.5

Adequacy of educational resources

Fig IV.3.8



Disciplinary climate improved

Teacher-student relations improved between 2003 and 2012 in all but one country; and disciplinary climate also improved during the period, on average across OECD countries and in 27 individual countries 38

Students' views of how conducive classrooms are to learning

Percentage of students who reported that the following phenomena occur "never or hardly ever" or "in <u>some lessons":</u>

0 20 40 60 80

Japan OECD average

%

Students don't listen to what the teacher says

There is noise and disorder

The teacher has to wait a long time for students to quiet down.

Students cannot work well

Students don't start working for a long time after the lesson begins

Fig IV.5.4

In most countries and economies, the disciplinary climate in schools improved between 2003 and 2012

Fig IV.5.13





High impact on outcomes

Incentives, accountability, knowledge management

• Aligned incentive structures

For students

- How gateways affect the strength, direction, clarity and nature of the incentives operating on students at each stage of their education
- Degree to which students have incentives to take tough courses and study hard
- Opportunity costs for staying in school and performing well

For teachers

- Make innovations in pedagogy and/or organisation
- Improve their own performance and the performance of their colleagues
- Pursue professional development opportunities that lead to stronger pedagogical practices
- A balance between vertical and lateral accountability
- Effective instruments to manage and share knowledge and spread innovation – communication within the system and with stakeholders around it
- A capable centre with authority and legitimacy to act

Countries that grant schools autonomy over curricula and assessments tend to perform better in mathematics



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Fig IV.1.15