


Education



How the world's  
most improved  
school systems  
keep getting  
better 😊

# Executive Summary

How does a school system with poor performance become good? And how does one with good performance become excellent? These were the questions policymakers and education leaders asked us in the wake of our 2007 report *How the World's Best Performing School Systems Come Out on Top*, in which we examined the common attributes of high-performing school systems.

In this new report, *How the World's Most Improved School Systems Keep Getting Better*, we attempt to answer these questions. We analyzed twenty systems from around the world, all with improving but differing levels of performance, examining how each has achieved significant, sustained, and widespread gains in student outcomes, as measured by international and national assessments. Based on over 200 interviews with system stakeholders and analysis of some 600 interventions carried out by these systems – together comprising what we believe is the most comprehensive database of global school system reform ever assembled – this report identifies the reform elements that are replicable for school systems elsewhere as they move from poor to fair to good to great to excellent performance.

The systems we studied were: Armenia, Aspire (a US charter school system), Boston (Massachusetts), Chile, England, Ghana, Hong Kong, Jordan, Latvia, Lithuania, Long Beach (California), Madhya Pradesh (India), Minas Gerais (Brazil), Ontario (Canada), Poland, Saxony (Germany), Singapore, Slovenia, South Korea, and Western Cape (South Africa).

## The report's findings include the following eight highlights:

- 1 A system can make significant gains from wherever it starts – and these gains can be achieved in six years or less. Student outcomes in a large number of systems have either stagnated or regressed over the last ten years. However, our sample shows that substantial improvement can be achieved relatively quickly. For instance, Latvian students in 2006 demonstrated performance that was half a school-year advanced to that of students in 2000. In Long Beach, six years of interventions increased student performance in grade four and five math by 50 percent and 75 percent respectively. Even systems starting from low levels of performance, such as Madhya Pradesh in India, Minas Gerais in Brazil, and Western Cape in South Africa, have significantly improved their literacy and numeracy levels within just two to four years, while making strides in narrowing the achievement gap between students from different socio-economic backgrounds. Improvement can start from any student outcome level, whatever the geography, culture or income.

2 **There is too little focus on ‘process’ in the debate today.** Improving system performance ultimately comes down to improving the learning experience of students in their classrooms. School systems do three types of things to achieve this goal – they change their *structure* by establishing new institutions or school types, altering school years and levels, or decentralizing system responsibilities; they change their *resources* by adding more education staff to schools or by increasing system funding; and, they change their *processes* by modifying curriculum and improving the way that teachers instruct and principals lead. All three of these intervention types – structure, resources, and process – are important along the improvement journey. The public debate, however, often centers on structure and resource due to their stakeholder implications. However, we find that the vast majority of interventions made by the improving systems in our sample are ‘process’ in nature; and, within this area, improving systems generally spend more of their activity on improving how instruction is delivered than on changing the content of what is delivered.

3 **Each particular stage of the school system improvement journey is associated with a unique set of interventions.** Our research suggests all improving systems implement similar sets of interventions to move from one particular performance level to the next, irrespective of culture, geography, politics, or history. For example, the interventions undertaken by Madhya Pradesh (India), Minas Gerais (Brazil), and Western Cape (South Africa) on the path from poor to fair performance have striking similarities. There is a consistent cluster of interventions that moves systems from poor performance to fair, a second cluster of interventions

does the same from fair performance to good, a third cluster from good performance to great, and yet another from great performance to excellent. For example, systems moving from fair performance to good focused on establishing the foundations of data gathering, organization, finances, pedagogy, while systems on the path from good performance to great focused on shaping the teaching profession such that its requirements, practices, and career paths are as clearly defined as those in medicine and law. This suggests that systems would do well to learn from those at a similar stage of the journey, rather than from those that are at significantly different levels of performance. It also shows that systems cannot continue to improve by simply doing more of what brought them past success.

4 **A system’s context might not determine what needs to be done, but it does determine how it is done.** Though each performance stage is associated with a common set of interventions, there is substantial variation in how a system implements these interventions with regard to their sequence, timing, and roll-out – there is little or no evidence of a “one-size-fits-all” approach to reform implementation. Our interviews with system leaders suggests that one of the most important implementation decisions is the emphasis a system places on *mandating* versus *persuading* stakeholders to comply with reforms. For example, while all improving systems make substantial use of data to inform their reform programs, only a subset of our sample systems translate this into quantitative targets at both school and classroom level, and then share this information publicly (U.S., England, Canada, Madhya Pradesh, and Minas Gerais). In contrast, Asian and Eastern European systems

refrain from target-setting and only make system-level data available publicly. Instead, they prefer to share performance data with individual schools, engaging them in a private dialogue about how they can improve. The systems we studied have adopted different combinations of mandating and persuading to implement the same set of interventions. For example, a system will tend towards persuasion when there are stark winners and losers as a result of the change, it can afford a longer implementation time-line, the desired change is not a precursor for other changes, the system and national leadership is at a tenuous moment of credibility and stability, and/or the historical legacy of the nation makes enforcement of top-down decisions difficult.

5 **Six interventions occur equally at every performance stage for all systems.** Our research suggests that six interventions are common to all performance stages across the entire improvement journey: building the instructional skills of teachers and management skills of principals, assessing students, improving data systems, facilitating improvement through the introduction of policy documents and education laws, revising standards and curriculum, and ensuring an appropriate reward and remuneration structure for teachers and principals. Though these interventions occur at all performance stages, they manifest differently at each stage. Taking the example of teacher training, for instance: while Armenia (on the journey from fair to good) relied on centrally-driven, cascaded teacher training programs, Singapore (on the journey from good to great) allowed teachers flexibility in selecting the topics that were most relevant to their development needs.

6 **Systems further along the journey sustain improvement by balancing school autonomy with consistent teaching practice.** While our study shows that systems in poor and fair performance achieve improvement through a center that increases and scripts instructional practice for schools and teachers, such an approach does not work for systems in ‘good’ performance onwards. Rather, these systems achieve improvement by the center increasing the responsibilities and flexibilities of schools and teachers to shape instructional practice – one-third of the systems in the ‘good to great’ journey and just less than two-thirds of the systems in the ‘great to excellent’ journey decentralize pedagogical rights to the middle layer (e.g. districts) or schools. However, in parallel, the center mitigates the risk of these freedoms resulting in wide and uncontrolled performance variations across schools by establishing mechanisms that make teachers responsible to each other as professionals for both their own performance and that of their colleagues. For example, these systems establish teacher career paths whereby higher skill teachers increasingly take on responsibility for supporting their juniors to achieve instructional excellence first within the school, then across the system. These systems also establish collaborative practices between teachers within and across

schools that emphasize making practice public – such as weekly lesson-planning for all teachers in the same subject, required lesson observations, and joint-teaching – that serve to perpetuate and further develop the established pedagogy. Although teachers receive 56 percent of all support interventions in our studied systems, they receive only 3 percent of accountability interventions. In other words, collaborative practice becomes the main mechanism both for improving teaching practice and making teachers accountable to each other.

7 **Leaders take advantage of changed circumstances to ignite reforms.** Across all the systems we studied, one or more of three circumstances produced the conditions that triggered reform: a socio-economic crisis; a high profile, critical report of system performance; or a change in leadership. In fifteen out of the twenty systems studied, two or more of these “ignition” events were present prior to the launch of the reform efforts. By far, the most common event to spark the drive to reform is a change in leadership: every system we studied relied upon the presence and energy of a new leader, either political or strategic, to jumpstart their reforms. New strategic leaders were present in all of our sample systems, and new political leaders present in half.

Critically, being new in and of itself is insufficient for success – these new leaders tend to follow a consistent “playbook” of practices upon entering office to lay the foundations for their improvement journey.

8 **Leadership continuity is essential.** Leadership is essential not only in sparking reform but in sustaining it. Two things stand out about the leaders of improving systems. Firstly, their longevity: the median tenure of the new strategic leaders is six years and that of the new political leaders is seven years. This is in stark contrast to a norm: for example, the average tenure for superintendents of urban school districts in the U.S. is just three years; the average tenure of education secretaries in England just two years; similarly, that of education ministers in France is two years. Secondly, improving systems actively cultivate the next generation of system leaders, ensuring a smooth transition of leadership and the longer-term continuity in reform goals. This second observation lies at the heart of how a handful of our studied systems (e.g. Armenia, Western Cape, Lithuania) have managed reform continuity despite regular changes of political leadership. The stability of reform direction is critical to achieving the quick gains in student outcomes outlined above.

## The fundamental challenge school system leaders face is how to

shepherd their system through a journey to higher student outcomes. This journey is all the more complex because system starting points are different, contextual realities vary, and system leaders face multiple choices and combinations of what to do along the way – a single misplaced step can result in system leaders inadvertently taking a path that cannot get them to their desired destination. While there is no single path to improving school system performance, the experiences of all the 20 improving school systems we studied show that strong commonalities exist in the nature of their journeys. This report outlines the aspects of these journeys that are universal, those that are context-specific, and how the two interact. We hope these experiences benefit school systems around the world in navigating their own path to improvement.

**Exhibit 8:**  
A unique “intervention cluster” exists for each improvement journey, with six interventions common across all journeys

Improvement journey	Poor to fair	Fair to good	Good to great	Great to excellent
Theme	<i>Achieving the basics of literacy and numeracy</i>	<i>Getting the foundations in place</i>	<i>Shaping the professional</i>	<i>Improving through peers and innovation</i>
Intervention cluster <sup>1</sup>	<ul style="list-style-type: none"> <li>▪ <b>Providing motivation and scaffolding for low skill teachers</b> <ul style="list-style-type: none"> <li>– Scripted teaching materials</li> <li>– Coaching on curriculum</li> <li>– Instructional time on task</li> <li>– School visits by center</li> <li>– Incentives for high performance</li> </ul> </li> <li>▪ <b>Getting all schools to a minimum quality level</b> <ul style="list-style-type: none"> <li>– Outcome targets</li> <li>– Additional support for low performing schools</li> <li>– School infrastructure improvement</li> <li>– Provision of textbooks</li> </ul> </li> <li>▪ <b>Getting students in seats</b> <ul style="list-style-type: none"> <li>– Expand school seats</li> <li>– Fulfil students’ basic needs to raise attendance</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Data and accountability foundation</b> <ul style="list-style-type: none"> <li>– Transparency to schools and/or public on school performance</li> <li>– School inspections and inspections institutions</li> </ul> </li> <li>▪ <b>Financial and organisational foundation</b> <ul style="list-style-type: none"> <li>– Optimization of school and teacher volumes</li> <li>– Decentralizing financial and administrative rights</li> <li>– Increasing funding</li> <li>– Funding allocation model</li> <li>– Organizational redesign</li> </ul> </li> <li>▪ <b>Pedagogical foundation</b> <ul style="list-style-type: none"> <li>– School model/streaming</li> <li>– Language of instruction</li> <li>– Language of instruction</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Raising calibre of entering teachers and principals</b> <ul style="list-style-type: none"> <li>– Recruiting programs</li> <li>– Pre-service training</li> <li>– Certification requirements</li> </ul> </li> <li>▪ <b>Raising calibre of existing teachers and principals</b> <ul style="list-style-type: none"> <li>– In-service training programs</li> <li>– Coaching on practice</li> <li>– Career tracks</li> <li>– Teacher and community forums</li> </ul> </li> <li>▪ <b>School-based decision-making</b> <ul style="list-style-type: none"> <li>– Self-evaluation</li> <li>– Independent and specialized schools</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Cultivating peer-led learning for teachers and principals</b> <ul style="list-style-type: none"> <li>– Collaborative practice</li> <li>– Decentralizing pedagogical rights to schools &amp; teachers</li> <li>– Rotation and secondment programs</li> </ul> </li> <li>▪ <b>Creating additional support mechanisms for professionals</b> <ul style="list-style-type: none"> <li>– Release professionals from admin burden by providing additional administrative staff</li> </ul> </li> <li>▪ <b>System-sponsored experimentation/innovation across schools</b> <ul style="list-style-type: none"> <li>– Providing additional funding for innovation</li> <li>– Sharing innovation from front-line to all schools</li> </ul> </li> </ul>
Common across all journeys	<p>Six interventions: [1] Revising curriculum and standards; [2] Reviewing reward and remunerations structure; [3] Building technical skills of teachers and principals, often through group or cascaded training; [4] Assessing student learning; [5] Utilizing student data to guide delivery, and [ 6] Establishing policy documents and education laws</p>			

<sup>1</sup> Total number of interventions in each phase: poor to fair, n=103, fair to good, n=226, good to great, n=150, great to excellent, n=94

Source: McKinsey & Company interventions database

## Exhibit 9: Poor to fair journeys focus on achieving basic literacy and numeracy

Theme	Description	Example interventions
Providing scaffolding and motivation for low skill teachers and principals	<ul style="list-style-type: none"> <li>▪ <b>Scripted lessons:</b> The system creates instructional objectives, lesson plans, and learning materials for daily lessons to teachers lessons to enable teachers executing lessons rather than devising them</li> <li>▪ <b>Coaching on curriculum:</b> The system creates a field force of coaches to visit schools and work with teachers in-class on effectively delivering the curriculum</li> <li>▪ <b>Incentives for high performance:</b> The system gives rewards (monetary and prestige) to schools and teachers who achieve high improvement in student outcomes against targets</li> <li>▪ <b>School visits by center:</b> The system's central leaders/administrators visit schools to observe, meet and motivate staff, and discuss performance</li> <li>▪ <b>Instructional time on task:</b> The systems increases student instructional time</li> </ul>	<ul style="list-style-type: none"> <li>▪ Prescriptive teaching materials</li> <li>▪ Technical skill-building</li> <li>▪ External coaches</li> <li>▪ School visits by center</li> <li>▪ Instructional time on task</li> </ul>
Getting all schools to minimum quality standard	<ul style="list-style-type: none"> <li>▪ <b>Targets, data, and assessments:</b> The system sets minimum proficiency targets for schools/students, frequent student learning assessments (linked to lesson objectives, every 3-4 weeks), and data processes to monitor progress</li> <li>▪ <b>Infrastructure:</b> The system improves school facilities and resources to a minimum threshold adequate for attendance and learning</li> <li>▪ <b>Textbooks and learning resources:</b> The system provide textbooks and learning resources to every student</li> <li>▪ <b>Supporting low performing schools:</b> The system funds targeted support for low performing schools</li> </ul>	<ul style="list-style-type: none"> <li>▪ Outcome targets</li> <li>▪ Assessments</li> <li>▪ Data systems</li> <li>▪ School infrastructure improvement</li> <li>▪ Provision of textbooks</li> <li>▪ Additional funding for low performing schools</li> </ul>
Getting students in seats	<ul style="list-style-type: none"> <li>▪ <b>Expand seats:</b> The system increases school seats to achieve universal access</li> <li>▪ <b>Fulfill students' basic needs:</b> The school provides for student basic needs to ensure that more students attend school and that absenteeism declines</li> </ul>	<ul style="list-style-type: none"> <li>▪ Meeting basic needs (meals, clothing, transportation, toilets)</li> <li>▪ Increase student seats</li> </ul>
<b>Systems included</b>	Chile (2001-2005) Madhya Pradesh (2006+) Minas Gerais (2003+)	Western Cape (2003+) Ghana (2003+)

Source: McKinsey & Company interventions database and system interviews

## Exhibit 12: Fair to good journeys emphasize getting the system foundations in place

Theme	Description	Example interventions	
<b>Data and accountability foundation</b>	<ul style="list-style-type: none"> <li>▪ <b>Transparency and accountability:</b> The system establishes student assessments and school inspections to create reliable data on performance and to hold schools accountable for improvement</li> <li>▪ <b>Improvement areas:</b> The system uses this data to identify and tackle specific areas (e.g., subjects, grades, gender) with lagging performance</li> </ul>	<ul style="list-style-type: none"> <li>▪ Student assessments</li> <li>▪ Transparency to schools and/or public on school performance</li> <li>▪ School inspections and inspections institutions</li> </ul>	
<b>Financial and organizational foundation</b>	<ul style="list-style-type: none"> <li>▪ <b>Organization structure:</b> The system takes steps to make the school network shape and governance manageable, and to delineate decision rights accordingly</li> <li>▪ <b>Financial structure:</b> The system establishes an efficient and equitable funding allocation mechanism for schools</li> </ul>	<ul style="list-style-type: none"> <li>▪ Optimization of number of schools or teachers</li> <li>▪ Decentralizing financial and administrative rights</li> <li>▪ Increasing funding and changing allocation model</li> <li>▪ Organizational restructuring</li> </ul>	
<b>Pedagogical foundation</b>	<ul style="list-style-type: none"> <li>▪ <b>Learning model:</b> The system selects a learning model consistent with raising student capabilities, and designs the necessary supporting materials for this new model (e.g., standards, curriculum, textbooks)</li> </ul>	<ul style="list-style-type: none"> <li>▪ School model (number of years students spend at each education level)</li> <li>▪ Streams/tracks based on student outcomes and academic focus</li> <li>▪ Language of instruction</li> </ul>	
<b>Systems included</b>	<p>Armenia (2003+)</p> <p>Aspire (2002-2003)</p> <p>Boston (2003-2005)</p> <p>Chile (2006+)</p>	<p>Hong Kong (1983-1988)</p> <p>Jordan (1999+)</p> <p>LBUSD (2002-2005)</p> <p>Latvia (1995-2000)</p>	<p>Lithuania (1995-2000)</p> <p>Poland (2000-2002)</p> <p>Singapore (1983-1987)</p> <p>Slovenia (1995-2005)</p>

## Exhibit 15: Good to great journeys emphasize shaping the professional

Theme	Description	Example interventions												
Raising calibre of entering teachers and principals	<ul style="list-style-type: none"> <li>▪ <b>Recruiting:</b> The system raises the entry bar for new teacher candidates</li> <li>▪ <b>Preparation and induction:</b> The system raises pre-service training quality and certification requirements</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recruiting programs</li> <li>▪ Pre-service training</li> <li>▪ Certification requirements</li> </ul>												
Raising calibre of existing teachers and principals	<ul style="list-style-type: none"> <li>▪ <b>Professional development:</b> The system raises professional development requirements and provides more opportunities for self-, peer-, and center-led learning and development</li> <li>▪ <b>Coaching on practice:</b> Instructional coaches work with teachers to strengthen their skills in areas such as lesson planning, student data analysis, and in-class pedagogy</li> <li>▪ <b>Career pathways:</b> The system creates teacher and leadership specializations through career pathways, raising expectations with each successive pathway rung and increasing pay accordingly</li> </ul>	<ul style="list-style-type: none"> <li>▪ In-service training programs</li> <li>▪ School-based coaching</li> <li>▪ Career tracks</li> <li>▪ Teacher community forums</li> </ul>												
School-based decision-making	<ul style="list-style-type: none"> <li>▪ <b>Self-evaluation:</b> The systems cultivates ownership in schools for improvement through introducing self-evaluation for schools and making performance data more available</li> <li>▪ <b>Flexibility:</b> The system gives schools the flexibility to pursue specialized programs appropriate to their students, and increasingly decentralizes pedagogical rights</li> </ul>	<ul style="list-style-type: none"> <li>▪ Self-evaluation</li> <li>▪ Data systems</li> <li>▪ Independent and specialized schools</li> </ul>												
<b>Systems included</b>	<table border="0"> <tr> <td>Aspire (2003+)</td> <td>Long Beach (2005+)</td> <td>Saxony (2000-2005)</td> </tr> <tr> <td>Boston (2006+)</td> <td>Latvia (2001+)</td> <td>Singapore (1988-1998)</td> </tr> <tr> <td>England (1995+)</td> <td>Lithuania (2001+)</td> <td>Slovenia (2006+)</td> </tr> <tr> <td>Hong Kong (1989-1999)</td> <td>Poland (2003+)</td> <td>South Korea (1983-1998)</td> </tr> </table>	Aspire (2003+)	Long Beach (2005+)	Saxony (2000-2005)	Boston (2006+)	Latvia (2001+)	Singapore (1988-1998)	England (1995+)	Lithuania (2001+)	Slovenia (2006+)	Hong Kong (1989-1999)	Poland (2003+)	South Korea (1983-1998)	
Aspire (2003+)	Long Beach (2005+)	Saxony (2000-2005)												
Boston (2006+)	Latvia (2001+)	Singapore (1988-1998)												
England (1995+)	Lithuania (2001+)	Slovenia (2006+)												
Hong Kong (1989-1999)	Poland (2003+)	South Korea (1983-1998)												

## Exhibit 17: Great to excellent journeys emphasize learning through peers and innovation

Theme	Description	Example interventions
<b>Raising calibre of entering teachers and principals</b>	<ul style="list-style-type: none"> <li>▪ <b>Learning communities:</b> The system facilitates school-based learning communities to create peer-led support and accountability to each other</li> <li>▪ <b>Flexibility:</b> The system provides effective educators with greater pedagogical autonomy</li> <li>▪ <b>Rotations:</b> The system rotates educators throughout the system in order to spread learning and varied styles of mentorship</li> </ul>	<ul style="list-style-type: none"> <li>▪ Collaborative practice amongst educators</li> <li>▪ Decentralizing pedagogical rights to schools and teachers</li> <li>▪ Creating rotation and secondment programs across schools, and between the center and schools</li> </ul>
<b>Creating additional support mechanisms for professionals</b>	<ul style="list-style-type: none"> <li>▪ <b>Leverage:</b> The system provides administrative staff in schools so that teachers and principals can focus on pedagogy and leadership rather than administrative tasks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Providing additional administrative staff</li> </ul>
<b>System-sponsored innovation across schools</b>	<ul style="list-style-type: none"> <li>▪ <b>Stakeholder innovation:</b> The system sponsors and identifies examples of innovative practices in schools (teaching and learning practice, parent/community involvement practices, etc.) and then develops mechanisms to shares these innovations across all schools</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sharing innovation from the front-line</li> <li>▪ Funding for innovation</li> </ul>

Systems included <sup>1</sup>	Hong Kong (2000+)	Saxony (2006+)
	South Korea (1999+)	Singapore (1999+)
	Ontario (2003+)	

<sup>1</sup> All these systems are on the journey from Great to Excellent and, while they demonstrate rising gains, none have yet attained the Excellent threshold on the universal scale (560+)

Source: McKinsey & Company interventions database and system interviews