



Enabling Transformation with Strategic Planning, Organizational Capacity and Sustainability

Transformation Framework

Microsoft in Education

About this series

The Microsoft in Education Transformation Framework is a guide for educators and leaders engaged in holistic education transformation. The critical conversations needed for effective transformation of education systems are the focus of this paper series. Each expert author presents a global perspective on the topic through the current thinking and evidence from research and practice, as well as showcase examples. Specifically, the papers document the contributions of anytime anywhere approaches to K-12 learning and explore the potential of new technology for transforming learning outcomes for students and their communities.



Microsoft in Education Transformation Framework Papers

- Vision for Anytime Anywhere Learning for All
- Enabling Transformation with Strategic Planning, Organizational Capacity, and Sustainability
- Quality Assurance: Monitoring and Evaluation to Inform Practice and Leadership
- Inclusion: Equitable Access and Accessibility
- Public, Private, and Community Partnerships for Employability
- Curriculum, Content, and Assessment for the Real World
- Personalized Learning for Global Citizens
- Learning Communities and Support
- Building Leader and Educator Capacity for Transformation
- Transforming Learning Environments for Anytime, Anywhere Learning for All
- Designing Technology for Efficient and Effective Schools

Table of Contents

About this series.....2

Microsoft in Education Transformation Framework Papers.....3

Summary.....5

Rethinking School Education Strategy.....6

A Single Strategic Objective: Improve Student Learning..... 11

Role Modeling 11

Building Capacity 12

Reinforcement Mechanisms Across the System..... 13

Guiding Questions for Enabling Transformation with
Strategic Planning, Organizational Capacity, and
Sustainability..... 15

References 16

Author Bio.....25

Acknowledgements25

Summary

Education strategy, including strategy for 1:1 learning, is increasingly aligned to evidence of effectiveness in most countries around the world. In this paper, it is proposed that reliance on the evidence base must be balanced with strategic approaches. High-performing education systems apply a behavioral change strategy the parameters of which are set by the evidence-base. This nuanced approach can have profound impacts on the effectiveness of education strategy at all levels of education. At the core of these strategies is a focus on improving learning and teaching. What matters is the recognition that improving learning and teaching is a behavioral change process. Thus, a change strategy focuses on organizational change and individual behaviors. At its core, it focuses on implementation and alignment because the strategy must detail how behaviors are changed. The effectiveness of the strategy relies on alignment of how the interventions will alter behaviors. Alignment of organizational needs, implementation plans, and professional actions are therefore at the core of a change strategy.

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Rethinking School Education Strategy

We have come a long way in education strategy. While previous decades saw a host of policy interventions that failed to reflect (and in a number of cases substantially contradicted) the evidence, there is now a greater focus on evidence-based policy.

A host of influential policy documents have had an impact.¹ At the same time, education research has produced many more quantitative analyses of the effects of various school and policy interventions (with Hattie's meta-analyses probably being the most well-known).² While it is probably impossible to measure their impact, there is little doubt that, for example, more systems now focus on improving teachers than reducing class size.³ While substantial gains are needed in analysing and promoting cost-effectiveness in education (as opposed to simply effectiveness studies that are much more common), education strategy is much more aligned to the evidence than it used to be in most countries around the world. The difficult question therefore is why aren't greater gains being made with more evidence-based approaches?

In this short paper I posit that part of the reason may lie in an over-reliance on the evidence-based at the expense of more strategic approaches. That the focus on the evidence base leads to what is termed here as a 'policy lever approach' that is generally having minimal impact. In contrast, high-performing systems are pursuing a behavioural change strategy the parameters of which are set by the evidence-base. This may sound like semantics but can have profound impacts on the effectiveness of education strategy at all levels of education.

At the core of these strategies is a focus on improving learning and teaching. This is not unique; most education systems around the world will put learning and teaching front and centre. What is different is the recognition that improving learning and teaching is a behavioural change process.

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"...high-performing systems are pursuing a behavioural change strategy the parameters of which are set by the evidence-base."

¹ OECD, 2010.

² Hattie, 2009.

³ Barber & Moorshed, 2007.

Improving children's learning is much more than simply changing the level at which they learn. It is changing their learning behaviours at school, in the classroom and at home. This will become even more important if the growing focus on 21st century skills – complemented by significant technological change in the classroom – is to truly transform the way children learn. Shanghai has finished atop of the previous two rounds of the OECD Program for International Student Assessment (PISA). School improvement and evaluation and accountability policies in Shanghai continually measure children's learning habits to develop those habits conducive to improved learning.⁴

Many policies around the world aim to improve teachers and teaching.⁵ Some are startlingly successful, but the lack of progress made by most systems around the world indicate most have minimal impact. They don't fail because they ignore the evidence; all the evidence points to improving teachers and teaching as the most productive reforms that policy makers can implement.⁶ But what makes these policies effective in high-performing systems is that the strategy focuses on behavioural change. To improve teaching requires teaching practices (or behaviours) in schools to change. It is impossible to change teaching without changing teaching practices. Therefore, almost by definition, improving teaching is a behavioural change process. While most systems around the world focus on improving teachers and teaching, relatively few are driven by a behavioural change strategy. Instead, a 'policy lever approach' dominates.

The 'policy lever approach' occurs as Governments and other stakeholders are encouraged to pull on those levers that have the biggest quantitative impact on outcomes. The result is that governments pull on a few of the biggest levers. They are rewarded for doing so as they are following the evidence. And in comparison to their predecessors this often a considerable improvement. But the lack of progress made by many systems around the world suggests that this approach will only result in limited improvement.

⁴ Jensen & Farmer, 2013.

⁵ OECD, 2014.

⁶ Aaronson et al., 2007; Jordan et al., 1997.

This policy lever approach has led to a greater national and international focus on teaching.⁷ Numerous policies have been aimed to better develop teachers or to hold them more accountable for their performance.⁸ Reflecting the policy levers approach, Governments have emphasised either accountability or development policies. Unfortunately, both regularly have minimal impact when they are not driven by a change strategy. The policy debate of development versus accountability is simply a by-product of the policy levers approach. It is driven by a levers approach that permits an artificial distinction between development and accountability that is not possible in a change strategy. A change strategy develops learning and teaching behaviours (with developmental policies) and continually reinforces them (with evaluation and accountability policies).⁹

More detailed policies are now reflecting a growing evidence base showing the importance of providing feedback to teachers.¹⁰ Providing feedback for teachers regularly requires substantial increases in collaboration and classroom observation to be effective.¹¹ This requires substantial organisational and behavioural change in most schools but this rarely features in policies to increase teacher feedback.¹²

Governments are, through the political process, incentivised to pursue a policy lever approach. A more systematic approach is much more difficult to communicate to stakeholders, to the media, and to the general public. This means that a simplistic pull the levers and follow the evidence communications strategy is preferred. Government bureaucracies are encouraged to follow suit. Ministerial briefs are written to cite the evidence and rarely cover more than one policy lever. Change strategies are made much more difficult given the structure and internal incentives of the process.

A lack of progress from the policy based approach has led to interesting policy discussions. Rarely has the strategy been questioned; it is very difficult to argue that an evidence based approach could be the wrong strategy. Instead, the problem is assumed to lie elsewhere. Poor implementation is often blamed.

⁷ Asia Society, 2014

⁸ See Fullan 2011 for key examples of these policy approaches.

⁹ Jensen et al, 2012.

¹⁰ Hattie, 2009; The Bill & Melinda Gates Foundation, 2010, 2013.

¹¹ Clement & Vanddenberghe, 2000; Zwart et al., 2007.

¹² Jensen & Sonnemann, 2014.

Regularly in policy discussions we hear of strategies that would have worked if they had been implemented with fidelity. Teacher professional development wouldn't have been a waste of time if it had have been implemented with fidelity. The teacher evaluation program wouldn't have failed if it had been implemented with fidelity. The school accountability program wouldn't have caused schools to revolt if it had been implemented with fidelity.

There are many reasons for these discussions and explanations for a lack of effectiveness. But for this short paper, it is important to recognise that poor implementation is regularly a direct result of the policy levers approach.

The policy lever approach is not focused on implementation. In fact, implementation is often kept quite separate or viewed as another lever. It also affects organisations dealing with reform. Too often they are separated into programmatic areas with each area representing an evidence-based lever. Strong distinctions between the development of a strategy and how it will impact schools makes it very difficult for the strategy to be effective. Sometimes, those in charge of the implementation stage are charged with creating a systematic approach. That somehow implies, during implementation period, the strategy could be redesigned. But of course, by this stage the horse has already bolted.

Poor alignment of policies and interventions in schools are also often blamed for an evidence based strategy being ineffective. Alignment in high-performing systems is often highlighted. This is an important discussion. But what is often missing in the discussion is recognition of the difference between alignment in a policy lever approach and alignment in change strategies. These differences are too detailed for a paper of this length but in short, the key difference is that the policy lever approach often implies alignment being ensured after the policy levers have been chosen and developed.

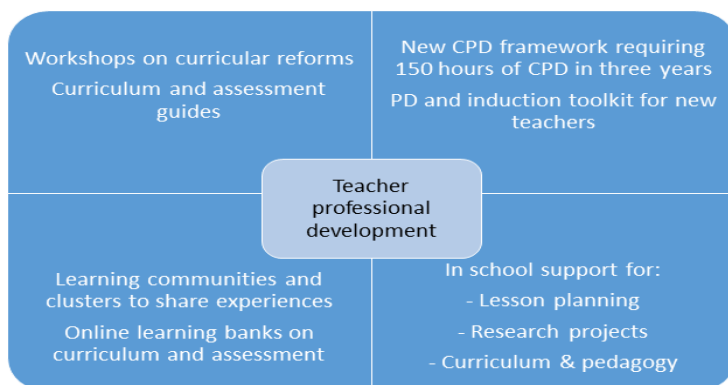
In contrast, a change strategy focuses on organisational change and individual behaviours. It is immediately focused on implementation and alignment because the strategy must detail how behaviours are changed. The effectiveness of the strategy relies on alignment of how the interventions will alter behaviours. Alignment is therefore at the core of a change strategy.

A change strategy is complex but in general it has four components. It:

- Provides a rationale for change by detailing the desired changes in learning and teaching that will increase learning outcomes.¹³
- Describes how system and school leaders will role model the new behaviours and practices.¹⁴
- Strengthens the capacity of leaders and teachers so they can make the required changes.
- Introduces evaluation and accountability mechanisms that continually reinforce behavioural change.¹⁵ Systems should monitor how, for example, professional learning is conducted in schools.¹⁶

A behavioural change strategy is an implementation strategy as it is all focused on how learning and teaching behaviours are changed in schools and classrooms. It is much harder to separate strategy and implementation when a strategy documents learning and teaching behaviours across a system and shows how policies interact to take these behaviours from where they are to where we want them to be.

A stylised example may better illustrate the differences. Hong Kong is a leading example of how education strategy can be developed and implemented with a change strategy. In 2000, Hong Kong outlined its education reform proposals.¹⁷ The main objective was to improve student learning and shift it from being dominated by rote learning focused on exams to one that encouraged critical thinking, problem solving and communication skills through broad learning experiences.¹⁸ This required a change in teaching practices and behaviours of every teacher in every classroom. To achieve this, every part of the reform supported behaviour change within the teaching profession.



¹³ Barber et al., 2011.

¹⁴ Fullan, 2009.

¹⁵ Lawson & Price, 2003.

¹⁶ Jensen & Farmer, 2013.

¹⁷ This commenced with a detailed strategy and implementation plan: Education Commission (2000)

¹⁸ Curriculum Development Council (2000)

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A Single Strategic Objective: Improve Student Learning

The rationale for change was provided with a single strategic objective to improve “the core business of learning”.¹⁹ The strategy clearly articulates the objective of changing student learning from a process that was monotonous, exam driven and characterised by passive learning to one where students learn through activities, building on what they know, interacting, creating and exploring new knowledge.²⁰ Therefore, teaching needed to change from one-way knowledge transmission geared towards examinations, to helping children develop learning skills.²¹ This was done through project and enquiry based learning in order to develop critical thinking, problem solving and communication skills.²²

Role Modeling

Consistent role modelling is important for behaviour change: people model their behaviour on those in positions of influence. Hong Kong political, government and business leaders were engaged in and advocated for the reforms. School leaders were crucial to implement reforms and role model change in every school. School principals were trained in the strategy and reform process and new school principals now undertake a certificate course.²³ This includes detail on Hong Kong’s policy environment, as well detail on the reform elements such as learning and teaching, curriculum and assessment reforms plus quality assurance and accountability mechanisms.

At the teacher level, new curriculum leaders in every school helped implement curriculum and pedagogy change.²⁴ These new positions were created in every primary school; in secondary schools, curriculum leaders were assigned to each key learning area. Each leader was given extensive training in the curriculum and pedagogy

Microsoft **21st Century Learning Design Rubrics** help educators develop pedagogical approaches to develop 21st Century skills. More than 2000 teachers in Hong Kong use the Microsoft Educator Network as a professional development resource.

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¹⁹ Cheng, K-M (2011) quoted in Jensen, B. et al (2012), p. 16. The education strategy was developed through 20 months of consultations with schools, teachers, parents, teacher unions and the business community. This included working groups including more than 100 educators and members of the public, plus three phases of consultation on the aims of education, the framework of education reform and proposals for reform: Education Commission (1999).

²⁰ Curriculum Development Council (2000) p.10

²¹ Education Commission (2000) pp. 60-62 details the new culture in learning and teaching including ‘shifting from transmission of knowledge to learning how to learn’.

²² These were the four pillars of curriculum reform: Education Commission (2000)

²³ Education Bureau (2012)

²⁴ These positions were initially established for a five-year period, but converted to permanent positions in 2007-08. See Education Bureau (2006)

reforms and undertook some training in conjunction with their school principal to ensure a consistent understanding of reforms.

- Online learning banks relating to curriculum and assessment reform for teachers to learn from each other's experiences.³⁰

Building Capacity

Behaviour change often requires people to develop new skills and capacity to make the change.²⁵ Hong Kong invested significant time in developing teachers' skills and providing them with resources to implement curriculum and pedagogy changes.

All schools and teachers attended workshops on implementing curriculum reforms. The Education Bureau developed teaching and learning resources for teachers to help with curriculum and assessment reforms. Teachers were given curriculum and assessment guides that contained practical examples of changing pedagogy and suggested ways for schools to implement school-based curriculum and assessment.²⁶ A range of professional development opportunities for teachers were developed to help teachers learn from each other. These included:

- A new Continuing Professional Development (CPD) framework requiring teachers to undertake 150 hours of professional development over a three year cycle.²⁷
- A professional development and induction tool kit for beginning teachers.²⁸
- The development of learning communities and district level clusters to help teachers learn from others' experiences and reinforce effective implementation within schools.
- In-school support programs to provide professional development and advice to teachers and schools. On-site support was negotiated with individual schools but could include collaborative lesson planning, research projects and consultancy services for curriculum and pedagogical issues.²⁹

²⁵ Lawson, E. and Price, C. (2003)

²⁶ For example, see Hong Kong Education Bureau (n.d.) Senior Secondary Curriculum Guide Series Booklet 3: Effective Learning and Teaching. Learning in the Dynamic World of Knowledge and Booklet 4: Assessment. An Integral Part of the Curriculum, Pedagogy and Assessment Cycle

²⁷ Advisory Committee on Teacher Education and Qualifications (2003). See for example Appendix E: Major Modes of Teachers' CPD Activities, p. 42.

²⁸ Advisory Committee on Teacher Education and Qualifications (2009). See also Ng, S.W. (2012) for a discussion of the mentoring and induction framework.

²⁹ A range of school-based support services and resources is provided for each level of schooling – Kindergartens, primary and secondary schools. See Education Bureau (2014). A whole suite of in-school support programs operate including a Principal Support Network, Professional Development Schools Scheme for schools to share their learnings with each other, University – School Support Program to provide

³⁰ For example, see the Assessment for Learning Resource Bank, Education Bureau (2013a)

The Education Bureau also targeted its funding for higher education research. Funding was targeted towards collaborative research and development projects for pedagogical reform in schools.³¹ This helped teachers develop effective practices within their local school context.³²

Reinforcement Mechanisms Across the System

Behaviour change will be more readily embraced when organisational structures, operational processes and performance measures are consistent with the behaviour that people are asked to change.³³

A new school development and accountability framework was introduced to ensure that schools were effectively implementing changes to teaching practices. Two types of school inspections were used: external school reviews and focus inspections. School-specific inspections evaluated learning and teaching changes, management and organisation, student performance and student support.³⁴ Evaluations were conducted using lesson observations, staff questionnaires, evaluation of students' work and discussions with parents and broader school community.³⁵ In contrast, focus inspections targeted specific areas of reform such as assessment or classroom observation techniques.³⁶ Teams of teachers and Bureau staff spent one to three days in schools observing lessons, interviewing and discussing teaching and management practices with staff. The inspection report detailed feedback and provided assistance to improve teaching practice.

The ultimate result can be seen in Hong Kong's improvement in international test results. In 2001, Hong Kong ranked 17th in the

³¹ The Education Bureau established the Quality Education Fund (QEF) to finance research projects designed to promote effective learning, implement school-based management, explore education issues and research the application of IT in schools. Each year QEF funds research based on project themes, aligned with the implementation of reform, or need of the education system. The QEF See www.qef.org.hk

³² In addition to research assisting schools and teachers in their local context, the QEF also disseminates and promotes research findings within the education system.

³³ Lawson, E. and Price, C. (2003)

³⁴ Education Bureau (2013b)

³⁵ Ibid.

³⁶ See material related to focus inspections of the use of English as the medium of instruction for further detail:

<http://www.edb.gov.hk/en/sch-admin/sch-quality-assurance/sda/moi/index.html>

Progress in International Reading Literacy Study (PIRLS) but jumped to 2nd in 2006 and improved again in 2011.³⁷ This success doesn't mean that the Hong Kong strategy is the only possible improvement strategy. But it is an excellent example of a strategy that focuses on changing learning and teaching behaviours.

A change strategy offers much potential for policy makers but can also create issues and questions in some systems. Does a change strategy require a more interventionist approach? This is difficult to answer (partly because interventionist regularly carries negative connotations) but in some respects yes. For example, accountability regimes that focus on changing teaching and learning behaviours require stronger connections with schools and classrooms than an accountability policy that compares test scores. Most high-performing systems that pursue a change strategy therefore have much greater observation and monitoring.³⁸

But we should also not pretend that more market based approaches are not trying to change behaviours. In fact, it is often the core of the policy to create incentives for improvement. It is therefore important to be precise about the specific behaviours that are being incentivised. This requires detailed analysis of the extent of market failure (and the resultant incentives), and of the precise learning and teaching behaviours being incentivised.

The focus on the evidence has been a huge step forward for education strategy and this paper is not arguing that we ignore the evidence. This would be disastrous. Nor does it criticise evidence-based researchers. They have and continue to make a huge contribution. They should not be blamed for how policy makers use and misuse their research. This paper is trying to address the unfortunate fact that evidence based policy is not producing the gains in learning outcomes that we would like (or expect). This paper posits that a behavioural change strategy can result in a more effective use of the evidence base. It would be terrible if we continue down the same path and reach a stage where we realise that our unrelenting focus on the evidence base has made most education reforms largely ineffective.

³⁷ Mullis et al (2007), p. 44 and Mullis et al (2012), p. 38.

³⁸ Jensen et al., 2012.

Guiding Questions for Enabling Transformation with Strategic Planning, Organizational Capacity, and Sustainability

- What does an innovative school look like here?
- What is the right teacher/student ratio?
- What is the right size/type of classroom/school to be classified as a 21st century smart classroom?
- What are the critical attributes of our new learning environments?
- Is there a time requirement for a school day, term, or year - can it be changed?
- What learning outcomes, curriculum requirements need to be used /developed?
- What are the minimum qualifications/expectations for new and existing teachers?
- What policies exist/need to be changed, enhanced or developed to ensure the vision allows for responsible and effective execution?
- What impact will the vision have on teacher requirements and expectations?
- What impact will the vision have on income, costs and parents?
- What eSafety/ eAware policies are required?

These tools for strategic planning come from the Global E-Schools and Communities Initiative, at <http://www.gesci.org/knowledge-tools.html#cat>.

They include:

- ICT Teacher Professional Development Framework Tool
- Planning Toolkit for ICT in Teacher Professional Development
- Capacity Audit Tool
- Educational Management and ICT
- ICT Infrastructure, Connectivity and Accessibility
- Total Cost of Ownership (TCO)
- Integration of ICT in Teaching and Learning
- E-content evaluation tool



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