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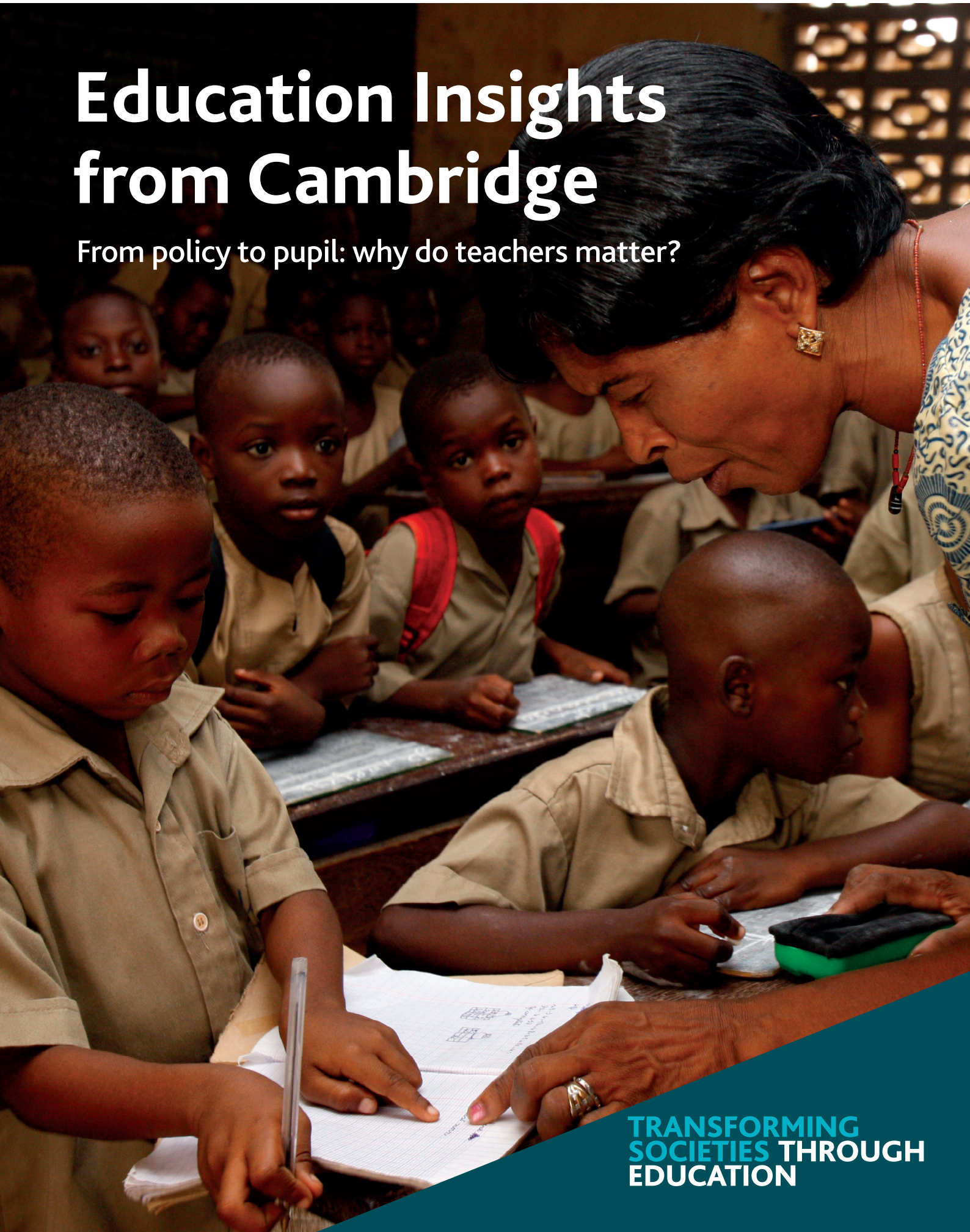
Education Insights from Cambridge

From policy to pupil: why do teachers matter?



TRANSFORMING SOCIETIES THROUGH EDUCATION

Contents

Foreword

Rt. Hon. Charles Clarke

Former UK Secretary of State for Education and Skills

The two most important educational relationships any child will ever have are those with their parents and family, and those with their teachers.

For every child, the nature of those relationships will be very personal. They will differ from those of their friends and from other children in other places.

But the teachers always matter. My first teaching experience, after leaving university, was in a secondary school in the London Borough of Brent where the challenges were both eye-opening and exhilarating. I came to understand very clearly that good teaching could make an enormous difference. It could quite literally transform for the better the life experience of any child. Similarly – and tragically – bad teaching had the capacity to damage a child forever.

That is why any educationally transformative government places excellent teaching at the centre of its policies. Brilliant, challenging and forward-looking teachers are the greatest asset any government can have in promoting educational reform and improvement in their country. What does this mean in practice?

- It means picking the right people to be teachers, and training them to have the capacity to teach all children, with all kinds of capacities, so that those children can fulfil themselves to the very best of their abilities. The teachers' own journey of continual professional improvement should last throughout their careers. Good teachers should be rewarded properly and professionally so that they have security in their jobs and respect in society.
- It means creating a school culture and environment that fosters high-quality teaching for all children and providing the best possible classroom conditions and facilities in order to foster learning, within the classical context of 'a healthy mind in a healthy body'.
- It means ensuring that teachers are properly supported with the textbooks and other high-quality teaching and learning materials that help the child along their own learning journey.

These policy ambitions for teaching seem simple and straightforward, but in practice they are difficult to achieve with real consistency and to a dependably high level of quality.

There are many reasons for this, and many challenges that need to be overcome. But the solutions themselves are actually clear and uncomplicated.

This report is designed to encourage these approaches and I hope that it will be of help in addressing any government's first educational priority, which is to stimulate and support good teaching for the nation's children.

Putting teachers at the heart of our education systems: views from around the world

In the OECD publication *World class: how to build a 21st-century school system*, author Andreas Schleicher notes:

'Nowhere does the quality of a school system exceed the quality of its teachers.'[1]

This may seem a truism: teachers matter. But then how do educationalists and governments around the world put teachers at the heart of their education system? We spoke to policymakers, academics, teacher trainers and teachers in three countries to hear their stories and found some surprising similarities, as well as differences, in what they had to say. These are some of the themes that emerged from Finland, Uganda and Malaysia.

Collective autonomy: empower teachers by trusting their professional judgement

The success of Finland's pupils in international league tables has made it the focus of education policymakers and educationalists around the world, and there are many opinions on the reasons for this success. Finnish education expert Pasi Sahlberg attributes much of Finland's ongoing success to the uniquely Finnish concept of 'collective autonomy', in which teachers became accountable not to government, but to each other. Pasi explores this concept further in his article (p.16).

Pasi believes that freeing teachers to work collaboratively, and respecting their capabilities as skilled professionals, is more important than any other Finnish policy or feature of their education system, including the often-mentioned observation that Finland's teachers are among the most educated in the world. This is a radical proposition.

While not many countries have pursued teacher empowerment to quite the same extent as Finland, it emerged as a common thread in conversations with educationalists in Malaysia. 'I call my students "agents of change",' said Safinas, a TESL teacher trainer who is closely involved in Malaysia's English Language Reform policy. She went on to explain: 'Teachers should be drivers of change in their own classrooms, sharing what they do in their own classrooms across their school and district. There is a need for teachers to be adaptive, and able to respond to advances in teaching and learning, and technology… Teachers need to take the initiative for their own improvements. We need passionate, engaged teachers who want to improve.'

Giving teachers confidence, resilience and space to take ownership of the learning in their classroom does not 'just happen'; it requires other shifts in the power dynamic between policymakers and schools.

Favour school-based assessment over high-stakes, external exams

External school accountability measures often involve regular, high-stakes exams in which the effectiveness of schools is linked to their students' performance. Much has been written about the unintended consequences of national testing. In Malaysia, up until five years ago, the exams-focused school culture led to 'teaching to the test' and certain skills and topics being favoured at the expense of others. Teachers were risk averse, and reluctant to experiment and try new ideas. While the recent shift towards School-Based Assessment (SBA) has not been universally supported by teachers, who associate it with more paperwork and record-keeping, this is an important shift in power from externally driven accountability to greater autonomy within schools, and the idea of trust which is so intrinsic to the success of the Finnish system.

Involve teachers in policymaking, not just policy implementation

In both Finland and Uganda, teachers steer the direction of travel: new policies are shaped by representatives from a national teachers' union, as well as the education ministry. (In Finland, there is a third party to the negotiating table comprising representatives from the Association of Finnish Local and Regional Authorities.) In Uganda, sub-sector working groups comprising teachers are involved in working out the detail of new policies. As Pasi Sahlberg says: 'This guarantees bad education policies won't be implemented, because they won't get beyond the initial discussion phase'. Giving teachers

[1] Schleicher, A. (2018). *World class: how to build a 21st-century school system*. Paris: OECD Publishing, p. 63

a stake in deciding the future of their education system also means that they are more likely to be positive when the policies are rolled out.

There is no doubt that the role of the teacher is emphasised throughout the Malaysia Education Blueprint 2013-2025,[2] but while educationalists in Malaysia are positive about the quality of education policies, one crucial element is missing: teachers' voice. As SISC+[3] officer Rahmawati explains:

'You have to get teachers' opinions (when new policies are being developed); they matter, they are the most important people in ensuring the success of the policies.'

Without the involvement of teachers, policies risk failing, regardless of how intrinsically well-founded they may be. This is changing for teachers in Malaysia: the layers of bureaucracy between policymakers and teachers have lessened, and educationalists are now represented on teacher consultation panels. These are steps in the right direction.

Pursue a coherent, stable and collaborative approach

Once formulated, consultation, training and provision of resources is essential throughout the implementation process. As Dr Kedrace Turyagyenda (Director of the Directorate of Education Standards, Uganda) notes:

'Consultations have to take place before a policy can be fully implemented. We know that if people on the ground don't understand the policy you won't get very far.'

Take Uganda's Mother Tongue policy, for example. Formulated to address concerns over poor education outcomes for primary school children, the policy supports the teaching of children in their mother tongue for the first few years of primary schooling. The rollout of the Early Grades Reading project has been locally managed by districts (in line with Uganda's decentralised system of government), in consultation with local communities to ensure their support. Teachers have been given structured training along with resources to use with their children.

A similar approach combining teacher training, coherent and aligned resources, and ongoing monitoring and support has underpinned Malaysia's English Language reform. Schools have set up professional communities to work together collaboratively through mentoring and peer coaching. 'In the past some policies have been rushed, and not supported with adequate resourcing, and then when the teaching community complains, they move onto the next policy. But that hasn't been the case with the English Language reform: they've consulted with parents, principals and teachers.'

The pace of change is another important consideration. As Dr Turyagyenda explains: 'But of course, the teacher must be given enough time to practise the initiative, and to develop the expertise and confidence to roll out the new approach. If the pace of change is too fast, and it continually changes, it is very demoralising and this undermines the professionalism of the teacher'.

Finally, and importantly, in Finland, education strategy is decoupled from party politics. Finland has a multiparty system, in which no single party wins an absolute majority. This coalition-based approach to government has enabled stability and continuity, with policies outliving a political term, ensuring that politicians do not continually revoke the policies of their political opponents.

What happens when it goes wrong?

We also spoke to educationalists in a variety of other countries. Not all of them had positive stories. For some, working in complicated, fragmented systems, there was a sense of hopelessness linked to lack of agency. 'In our world, there is no teacher status. We are the lowest people in the society. Teachers would rather resign and be unemployed than working in schools,' says Mahmoud, an English teacher with 20 years' experience working in state schools. His comments show what happens when the system fails to recognise the importance of the teacher.

In Mahmoud's country of work, the pace of change is unsustainable. In the 12 years he has been at his current school, the curriculum has changed eight times. 'As teachers, we are just delivering the policy without any support or resources. For example, when they introduce another curriculum, there is no professional development. There is no support for implementation. We also do not have time to become familiar with the curriculum: one month after getting it, I have to start teaching it.'

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[2] 'Quality teaching is the most effective lever available to transform primary and secondary education and deliver improved outcomes for students.' Ministry of Education Malaysia (2013). *Malaysia Education Blueprint 2013-2025: (preschool to post-secondary education)*. Malaysia: Government of Malaysia

[3] School Improvement Specialist Coach Plus. Role-holders are experienced teachers who have been taken out of the classroom to monitor and support others in the profession.

Mahmoud concluded: 'I am not involved in decision-making; I am just performing.'

High levels of attrition among teachers, resulting in staff shortages and high turnover, mean that there is no consistency in teaching, resulting in little or no learning taking place: 'I have students who are 12-15 who cannot even read in their native language, not to mention English. Some students do not even know how to hold a pen. So we have to start with basic literacy skills, and the alphabet, at secondary school.'

The picture is bleak in such systems. According to those who were consulted, the fundamental issue is that the value of education is not enshrined in society and its cultural values. 'There's a lack of transparency and honesty throughout the system, but they don't value education. As teachers, we want respect.'

Like his peers, Mahmoud is considering leaving the profession.

Common challenges

We found many common challenges, even in successful, flourishing systems.

Teachers are working ever harder, feel exhausted by the amount of work expected of them, and struggle with the increasing demands of paperwork. This was identified as a concern even among teachers in Finland, Uganda and Malaysia. Teacher wellbeing is the responsibility of all in the education system, from policymakers to schools, and the challenge is to ensure that initiatives intended to alleviate the burden do not inadvertently add to it. For policymakers and school leaders this is a challenge: how do they strive to improve, innovate and build on good practice without pushing teachers to the brink of exhaustion and beyond?

In Finland, for the first time in decades, the economic downturn is leading to a two-tier education system, with wealthy municipalities continuing to provide world-class education, while those in the northern regions struggle to maintain the status quo. This economic gap between wealthy and struggling municipalities is threatening to divide politicians, educationalists and schools.

In Uganda, cuts to the education budget are even more fundamental: up to six children may share a textbook, while class sizes have soared to 120. With teacher salaries frozen, coupled with high population growth and a refugee crisis, it is hard to train and recruit enough new teachers to meet demand. While politicians are aware of the crisis, and efforts are being made to address it, the Undersecretary for the Ministry of Education and Sports in Uganda, Mr Kabenge, candidly acknowledges that this is a problem that is only likely to be resolved through additional resources, which in turn rely on an upturn in Uganda's economy. Nonetheless, in spite of these challenges, Uganda is seen as an 'education destination' for neighbouring countries, with foreign students opting to be educated in Uganda, because of the low cost and quality of education.

Learn from the policymaking experience, not from the policies themselves

For policymakers under pressure to drive up education standards and outcomes, there is an increasing trend to turn to high-performing jurisdictions in an attempt to replicate their success by adopting initiatives and strategies. Often, this is without a real understanding of the culture, historical and political contexts which have shaped these countries' education systems. In the words of a teacher in Malaysia:

'Don't just come up with an idea which might be from Finland or Shanghai, and decide that teachers here will do it too. No, it may happen in that country, but you have to check that it will work in our country, and for our society and culture.'

Separating consequences from causes is essential, and many of the features of successful systems are consequences, not causes, of what makes the system work. For example, the extent to which teachers are involved in policymaking also implies certain value judgements over teachers' status in society. It is a little-known fact that up to half of Uganda's cabinet are ex-teachers. Teaching, and education, are very literally the stepping stones to success. Similarly, in Finland, being a teacher is one of the highest-status professions – a shift that can again be traced back to the rise of the profession as part of the country's educational transformation.

For politicians looking for quick wins, evidence-based policymaking can mean basing decisions on international league tables and statistics. In Finland, evidence-based teaching means something different. It means listening and responding to the collective wisdom of teachers. As the teachers who have been interviewed for this article would say, 'Hear, hear'.

About this research

While the experiences and stories shared by the participants in this consultation are not necessarily representative of the educational stakeholders in their country, and this article does not represent a systematic review of policies, it does give some interesting anecdotal evidence and insights into the balance of power versus autonomy in different systems. We have sought to highlight, in the views of respondents, what seems to have worked, what is work in progress, and what perceptions there are of educational policy implementation among the teaching profession itself.

Improving pedagogy – there are reasons why it isn't easy

Tim Oates CBE

Tim Oates is Group Director of Assessment Research and Development at Cambridge Assessment.

Educational reform is not new. The impression given by so many of the naïve futurologists is that we have never before faced such challenge of social and economic transformation as we do now. It is true that we face challenge, but not so that policymakers and educationalists have never faced such challenge previously. Mass transformation of production has occurred frequently and continuously since the agricultural and industrial revolutions of the past three centuries.

Nearly two decades ago the late Ted Wragg emphasised the complexity of teaching, and what contributed to that complexity. Teacher workload is now a hot topic, and people are beginning to understand that with every task and responsibility loaded onto teachers, the attractiveness of the fundamental task of education can be reduced. But understanding the complexity of teaching is, I believe, fundamental to its improvement.

We are not going to improve education simply by asking teachers to do more or by shouting at them to change. Ted was right; any sophisticated analysis of teaching shows that its very essence is complex activity. Teachers need to prepare for fundamentally changing the mental constructs of 30 children in 40 minutes. Michael Young rightly asserts that most of what we want children to learn at school is counterintuitive. That's the point of education – learning things in literature, sciences and maths that otherwise would not naturally be acquired by everyday experience. This is really challenging to both pupils and teachers.

Teachers need to shift strategies during the lesson to achieve this 'change of mental state', engage in hundreds of speech acts, maintain order and detect the level of engagement of each and every child – as well as carry responsibility for a large range of administrative requirements. By nature, it is complex. And curriculum models add further responsibilities by signalling that learning should not only be directed at discipline knowledge but simultaneously at 'learning dispositions', emotional and social learning, and 'higher order skills'. All at the same time. Some of these models are well grounded, some of them are not – all of them increase the complexity of the professional responsibilities of teachers.

The moment we consider the nature of professional competence in other occupational areas, we find a rich seam of research which emphasises a key matter: to function effectively and consistently, surgeons, pilots and plasterers turn much of their activity into automatic behaviour. The notion of 'multitasking' can in no way explain the way that professionals undertake their roles. Training and protracted experience moves behaviour from the conscious to the unconscious. This makes all professionals capable of dealing with complexity by having a thousand unconscious options for routine aspects of complex activity, and consciously attend to the difficult variations, or the main purpose of a task.

Teachers are just as limited by the shape of their cognitive processes as any other human being. Once we begin to understand this, we can not only understand how to support teachers, but we can also understand why changing their practices is so hard – both for them and for policymakers. Even faced with new strategies which are evidence-based and of proven value, the vast, necessarily unconscious elements of performance will still be in place, driving existing action and resisting change. We see this in a hundred examples of derailed historical change in education.

Like Finland in the 1970s and Singapore over the past five decades, successfully shifting the unconscious elements of teaching practice requires vibrant discussion about aims, intensive staff development, high-quality materials, and institutional improvement strategies. Only when we truly understand the nature of teaching can we embark on jointly constructed and widely implemented educational improvement.

Teachers can teach better with a textbook - but only if they know how to use it effectively

Jane Mann

Jane Mann is Director of Education Reform at Cambridge University Press.

The headlines in March 2018 declaring that 'Textbooks pay for themselves in four and a half minutes'[4] highlight the real value of high-quality teaching and learning materials in classrooms. The claim came from a United Kingdom (UK) study by Frontier Economics, commissioned by The Publishers Association. It identified that the value of textbooks in reducing the hours teachers spent preparing for lessons proved that cutting textbook use is a false economy. The report also highlighted that, as well as these time-saving benefits, 'Textbooks also directly increase student learning by improving lesson quality and helping students study outside the classroom'.[5] In the UK, this report came at a time when there has been a growing 'ideological hostility to the use of textbooks',[6] but the results would not have come as news to the highest performers in PISA and TIMMS, given that the correlation between consistent use of the textbook in the classroom and chart-topping scores has been evident for some time.[7]

When you consider the intimate connection that textbooks have to teachers and learners – their 'concrete and daily'[8] place in the classroom – their potential power is not hard to understand. Textbooks bridge the gap between the intended and the enacted curriculum; 'they are the stuff of lessons and units, of what teachers and students do'.[9]

But, in the words of Voltaire – or Spiderman, depending on your literary tastes – with great power comes great responsibility, and this 'most visible part of the curriculum'[10] needs to be created well and used wisely if it is to achieve its maximum potential, benefiting teacher and learner alike.

Tim Oates' work in 2016,[11] which defined the criteria for high-quality teaching and learning materials, revealed the science behind good textbook design. Simply being aligned to the curriculum is not enough; these materials must carry complex functions – from ensuring transmission of best practice, to encouraging effective acquisition and development of key ideas by learners.

Moreover, teachers need to know how to deploy them to best effect, and be reassured that their use does not somehow indicate a lack of confidence or expertise in teaching. As we have seen, the evidence shows that even highly experienced, excellent teachers can teach better with a textbook; this is because the book frees them up to concentrate on more productive tasks – more 'teaching', if you like.

In 2016, the UK Department for Education created a task force to investigate the issue of high teacher workloads, commonly cited as a core reason why teachers were leaving the profession. The ensuing report found that 'high quality resources, including textbooks, can support teaching, reduce workload by teachers not having to 'reinvent the wheel', and ensure high expectations of the content of

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[4] Leicester, A., Rezinsky, E. and Lawrence, D. (2018). *Publishing's contribution to school education. The role of educational materials in teacher time savings.* https://www.publishers.org.uk/policy/value-of-uk-publishing/

[5] ibid.

[6] Oates, T. (2014). *Why textbooks count. A policy paper.* Cambridge: Cambridge Assessment. (See Foreword by Nick Gibb MP, then Minister of State for School Reform).

[7] TIMSS data, 2014.

[8] Ball, D.L. and Cohen, D.K. (1996). 'Reform by the book: what is – or might be – the role of curriculum materials in teacher learning and instructional reform?' *Educational Researcher,* Vol. 25, No. 9, pp 6-8.

[9] ibid.

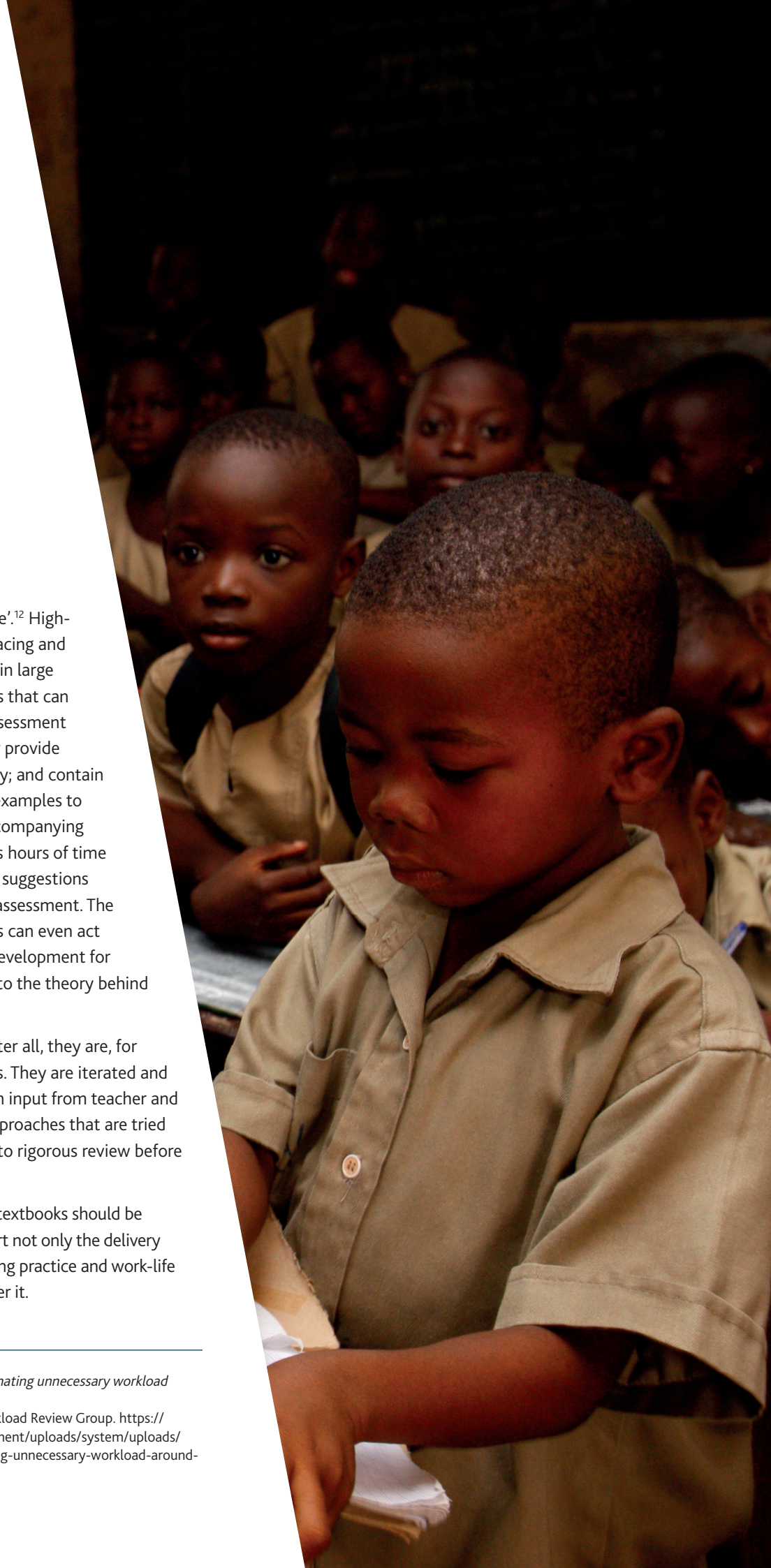
[10] Georgescu, D. and Bernard, J. (2007). *Thinking and building peace through innovative textbook design. Report of the Inter-Regional Experts' Meeting on developing guidelines for promoting peace and intercultural understanding through curricula, textbooks and learning materials.* Geneva: UNESCO International Bureau of Education.

[11] Oates, T. (2016). *The Cambridge approach to textbooks. Principles for designing high-quality textbook and resource materials.* Cambridge: Cambridge Assessment.

lessons and conceptual knowledge'.[12] High-quality textbooks help with the pacing and progression of studies; they contain large numbers of well-crafted questions that can be used for self- and formative assessment by student and teacher alike; they provide parameters to the domain of study; and contain expertly curated and researched examples to illustrate important concepts. Accompanying teachers' guides can save teachers hours of time in preparing lessons and can offer suggestions for differentiation and formative assessment. The best-designed educative materials can even act as a daily supply of professional development for teachers looking to delve more into the theory behind their practice.

And of course they do all this – after all, they are, for the most part, written by teachers. They are iterated and improved year upon year based on input from teacher and student panels. They represent approaches that are tried and tested, and are often subject to rigorous review before publication.

Created *by* teachers, *for* teachers, textbooks should be embraced for how they can support not only the delivery of a curriculum, but also the working practice and work-life balance of those expected to deliver it.



[12] Department for Education (2016). *Eliminating unnecessary workload around planning and teaching resources.* Report of the Independent Teacher Workload Review Group. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/511257/Eliminating-unnecessary-workload-around-planning-and-teaching-resources.pdf

Raising the status of teachers

Professor Dame Alison Peacock

Professor Dame Alison Peacock is Chief Executive of the Chartered College of Teaching.

We need to see teaching not just as a job or career, but as an intellectual endeavour. It is one of the most challenging of jobs, which is also what makes it so attractive. But it has been likened to doing a puzzle you can never fully solve – that constant quest every day to find what works for every child, every learner, in every class.

To be a professional is to engage with this quest throughout one's career. This means engaging with research and practice to find 'what works' for each child to maximise his or her learning outcomes.

What help do teachers need from those driving reform at the top to do this?

- Give teachers access to useful research and information online. Create communities of practice, not at conferences (top down) but through exchange visits (bottom up), spending time in each other's classrooms and schools – not to judge but to share learning about what works.
- Foster a spirit of collegiality and give teachers time to talk through challenges and potential solutions with their colleagues. Find teachers that are doing good things and help them share those practices.
- Give teachers career paths, so they can gain higher status through more pay if they engage in reviewing practice and sharing learning with others. (In short, incentivise the changes you want to see.)
- Take a global perspective. Teaching is essentially a collective endeavour in which we can all learn from each other to continuously improve each child's learning outcomes.

We know that in high-performing jurisdictions, there is an expectation that learning will be of high quality and will be directly relevant to children's lives. This is key: whatever the setting, we need to make sure that the cognitive science that helps us learn about pedagogy relates to real children, in real classrooms, and their real lives outside the classroom – that's when teaching is most effective.

Raising the status of the teaching profession also means trusting teachers, informing them, giving them access to quality research. At the Chartered College of Teaching, we are presenting ideas and gathering experience from teachers who are trying different things – based on evidence and their own experience – and saying 'this is what worked in our case'. In essence, we are striving to bring the theory and practice together to find the 'grit in the oyster that makes the pearl'. We are also helping teachers to navigate the swathes of evidence out there, by conducting literature reviews and highlighting promising examples of practice. In doing this, we are also trying to get teachers to generate the big questions that researchers still need to address.

Teachers matter: the role of teachers in reform and scaling it up

Colleen McLaughlin

Colleen McLaughlin is Professor and Director of Educational Innovation, University of Cambridge Faculty of Education, Cambridge, UK.

'The first, and most important, lesson is that no education system can be better than the quality of its of teachers.' [13]

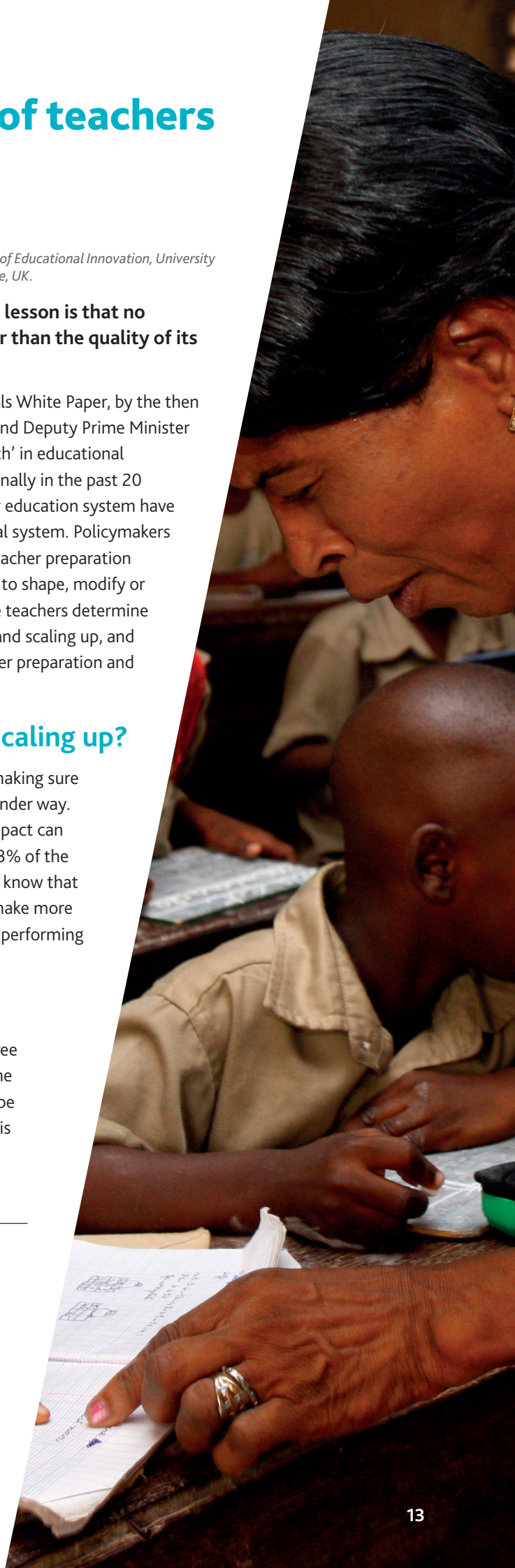
This quotation from the 2010 Schools White Paper, by the then UK Prime Minister David Cameron and Deputy Prime Minister Nick Clegg, echoes a newfound 'truth' in educational research and one that has driven much policy and practice internationally in the past 20 years. Many countries that have implemented major reforms of their education system have focused on creating high-quality teachers and a 'learning' educational system. Policymakers have built a system that acknowledges the key role of the teacher, teacher preparation and development. Since the goal of almost all reform in education is to shape, modify or change a classroom practice, the teacher is a central figure – because teachers determine what happens in the classroom. Teacher quality is central to reform and scaling up, and is the current international concern. This applies to both initial teacher preparation and continued teacher learning.

How do teachers matter to reform and scaling up?

Teachers determine quality learning and all efforts should focus on making sure that teachers understand and have some ownership of the reforms under way. Teachers make a significant difference to student attainment. The impact can range from small but meaningful, to huge. Teachers can account for 3% of the variance between outcomes or account for up to 18% of growth. We know that student outcomes depend on teachers' practices and that teachers make more of a difference to outcomes than parents, for example.[14] The highest-performing nations all have significant professional development of teachers.[15]

The form of teacher learning?

Research and practice have shown us two key features: first, the degree of collaborative professional learning, and second, the amount of time integrated into teachers' professional lives.[16] Examples of this are to be found in Singapore, Sweden and the Netherlands, where 6% of time is spent on teacher development.



[13] Department for Education (2010*). The importance of teaching. The Schools White Paper 2010.* London: HMSO.

[14] Ronfeldt, M., Schwartz, N. and Jacob, B.A. (2014). 'Does pre-service preparation matter? Examining an old question in new ways.' *Teachers College Record,* Vol. 116, No. 10, pp 1-46.

[15] Darling-Hammond, L., Chung Wei, R., Andree, A., Richardson, N. and Orphanos, S. (2009). *Professional learning in the learning profession. A status report on teacher development in the United States and abroad.* Stanford, CA: National Staff Development Council and The School Redesign Network at Stanford University.

[16] Darling-Hammond, L., Chung Wei, R. and Andree, A. (2010). *How high-achieving countries develop great teachers.* Stanford, USA: SCOPE Stanford.

It is not just the time but also the nature of the professional learning that matters. We now know that there is a clear evidence chain involving teacher professional development and student achievement,[17] *if* the following characterise the professional learning:

- If teachers have strong training in both content and pedagogy and more opportunities to plan and evaluate teaching with one another.
- If teachers are engaged in 'authentic pedagogy' that supports active learning in real-world contexts.
- If the school's performance assessment or outcome data guides student work and informs teaching – i.e. if there is a real connection between assessment, future teaching and the learning of students. It is a warning against testing for the sake of testing.

Some approaches to reform and scaling up are teacher friendly and some are not. As Darling-Hammond has argued,[18]

'To transform systems, incentives should be structured to promote collaboration and knowledge sharing, rather than competition, across organizations. Knowledge-sharing is needed to develop not only learning organizations but a learning-oriented system of education in which ongoing evaluation and inquiry into practice are stimulated within and across classrooms, across schools partnered within regions, and within the system as a whole.'

So we need to work seriously on creating a learning environment for teachers if we are to create success for students. There needs to be a coherence to the lived experience of teachers and an unrelenting focus on learning of and for all.

It is within this collaborative learning environment – driven by teachers given time to fully understand and implement the learning from content and pedagogy training – where the fullest benefits of teachers themselves can be realised.

This piece was extracted from an address given to the VIII NIS International Conference, 'Taking Change to Scale in Education', held on 27-28 October 2016, in Astana, Kazakhstan.

[17] Timperley, H., Wilson, A., Barrar, H. and Fung, I. (2007). *Teacher professional learning and development. Best evidence synthesis iteration (BES).* Wellington, New Zealand: Ministry of Education/OECD.

[18] Darling-Hammond, L. (2012). *Creating a comprehensive system for evaluating and supporting effective teaching.* Stanford, CA: Stanford Center for Opportunity Policy in Education.

Does trust in teachers contribute to the success of some of the world's leading education systems?

Lucy Crehan

Lucy Crehan is a qualified teacher, international education consultant and the author of Cleverlands: the secrets behind the success of the world's education superpowers.

At a first, cursory glance over a blog or two, the solution to demotivated teachers and low retention rates seems obvious. Teachers in England and the United States (US) work in hyper-accountable environments, in which lessons are observed and judged, and sometimes linked to pay – so wouldn't all our problems be solved if we just treated them as professionals and trusted them to get on with the job?

That's what they do in Finland. Having spent a month in Finnish classrooms, teaching and observing, I can confirm that teachers there really are trusted and, as Pasi Sahlberg discusses (page 16), have a lot of autonomy over how they teach. It is a very pleasant environment to work in. But is this the reason for their PISA success? I don't believe so.

Giving autonomy to teachers will lead to better student outcomes (however you wish to define these) if three conditions are present:

- teachers are motivated to improve student outcomes
- they know how to improve student outcomes
- they have the resources (time and materials) to do so.

Teacher motivation is an enormous topic, but allow me to speculate that many demotivated teachers did not begin their career that way; they became so due to a continued absence of know-how and supportive resources, denying them the motivation that comes from seeing students succeed.

Autonomy with motivation, but little knowledge or guidance, can be a dangerous thing, as teachers may pursue fads or implement teaching strategies that actually hinder children's learning. Finland's teachers, on the whole, make good use of their autonomy because they have all had high-quality teacher training. That includes learning how to use practical strategies in the classroom rather than just learning about abstract, theoretical ideas, which make up the majority of initial teacher training courses in many countries. In the words of one Finnish teacher I interviewed, 'Many times I think it's about the methods, you know? You have to know the methods, you have to learn the methods. Of course, you can think of ideas yourself, but it's always easier if you've seen examples.'

Lastly, but perhaps least discussed, is the importance of teacher resources in top-performing systems. High-quality textbooks and teachers' guides are commonly used, which frees up teachers' time. Teachers are not planning their lessons from scratch (as they often do in the UK and the US); instead, they use their expertise and autonomy to build on and adapt pre-existing lesson plans and materials. As one teacher told me:

'In Finnish schools, the textbook is the main tool. Experienced and skilful teachers have come together with the publisher to create an interesting, enjoyable and motivating textbook based on the current curriculum. Nowadays teachers have so many other things to do than planning the lessons that I would say all teachers depend on the materials a lot... Of course, there are some exceptions – teachers who insist on doing things on their own and maybe not even using textbooks, but that's really rare. Who has time?'

This does not lead to a lack of professionalism, any more than supplying a doctor with drugs she has not produced herself leads to a lack of professionalism – this is precisely what allows teachers to be trusted as professionals to get on with their important work of educating the next generation.

From individual freedom to collective autonomy in Finland's schools

Pasi Sahlberg

Pasi Sahlberg is Professor of Education Policy and Research Director at the Gonski Institute for Education, University of New South Wales Sydney.

When I began my teaching career in the mid-1980s as a mathematics and science teacher in Helsinki, I remember my new colleagues telling me how strict directives that came from the national authorities orchestrating what teachers should (and should not) do often went into incomprehensible levels of detail. We teachers felt that we were much better prepared to use our professional knowledge and judgement than these central regulations allowed us to do in our classrooms. Therefore, we often suggested that the administration should give us more individual freedom to craft the best possible learning conditions for our students rather than following one-size-for-all scripts.

The 1990s brought huge transformation to Finland's centrally managed education landscape. The focus shifted from teaching to learning, and from delivering content to assessing what students learn in school, while power over many of these decisions was decentralised from the cabinets in Helsinki to local education authorities and schools around the country. These changes radically altered how the old Finnish school system worked.

Local authorities' new decision-making power gave teachers more long-awaited professional freedom. All schools were expected to use this increased autonomy to design their own curriculum under the guidelines of the national curriculum framework. Many of us celebrated this delegation of powers to schools and teachers. As we watched this happening, however, we were somewhat concerned that teachers' individual freedom could – if not understood comprehensively – lead to less collaboration among teachers and between schools as time went by. The education community, including the leadership and teachers, decided to avoid this by strengthening collaborative practices within the Finnish education culture.

All Nordic countries share common values of collective responsibility, helping one another and social justice. It is therefore natural that cooperation is the foundation of everything that schools do. Building cooperative schools often started first in the classrooms, where teaching and learning

gradually shifted from individual learning towards small group learning and cooperation. When children collaborate to learn, it also boosts teacher collaboration when they teach. This is what happened across Finland. Collaboration and teamwork became the key *modus operandi* in most municipalities and schools.

School principals adopted the idea of shared leadership and cooperative learning in schools, and practices indeed began to change. Some of them were challenged by the question: 'How can we build more collaborative cultures in schools and at the same time respect the individual freedom of teachers as professionals?' Some teachers interpreted individual freedom as autonomy to do what they saw best for their students and themselves. Again, Finland came up with a solution that some might view as a paradox: collective professional autonomy.

'Collective autonomy' became known to educators through an award-winning book by Andy Hargreaves and Michael Fullan titled *Professional Capital* in 2012.[19] According to the authors, 'collective autonomy' means that teachers have more autonomy from bureaucracy and administration but less autonomy from one another. This principle – that schools are collectives of professionals having more freedom to craft teaching and lead the way in their schools – fitted perfectly in the Finnish educational philosophy. Today, when schools are recruiting new heads or teachers, the candidates are regularly tested in how well they understand and are able to contribute to this critical balance of collaboration and individual autonomy.

Unfortunately, collective professional autonomy and how schools operate through lateral professional power relations within schools has remained a less explored part of the education system by those foreign and domestic observers of Finnish schools. The fact that teachers who are highly educated professionals in Finland have a collective voice about what is best for their schools has been a significant aspect of the entire Finnish success story that is told around the world. Similarly, teachers in Finland respect the views and expectations of children in their schools, which is a critical element of student engagement and their sense of belonging in school.

Instead of taking a closer look at some of these often-hidden parts of the Finnish education system, observers often pay attention to some of the more visible things, such as class sizes, quality of buildings and facilities, and the types of curricula – plus all other low-hanging fruit. Then there are those who draw their conclusions without even bothering to visit the country. This leads to various kinds of trouble: one, cherry-picking single ideas that seem to be behind schools' success, and two, following myths or wrong leads altogether regarding what explains high educational performance in Finland. Both of these courses of action can be very harmful for those taking them seriously. They also compromise a better understanding of the complex nature of education systems and what the significance of Finland's educational transformation really is for educational improvement around the world.

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Teachers as agents of change: creating and nurturing communities of practice

Tom Bennett

Founder of researchED, a grass-roots organisation that raises research literacy in education.

One of the things that propelled researchED's success is giving teachers a more equitable voice around the table. ResearchED was founded on the belief that the teaching profession should lean on evidence where it exists, should try to become more research literate, and should ask for evidence at every turn.

Ministers of education rely on traditional hierarchies (such as teacher unions and teacher training institutes) to access teacher voices – and, of course, that makes perfect sense. But the spaces opened up by digital technologies and social media mean there is now a way of avoiding the risk that traditional avenues or portals will act as 'gatekeepers', keeping certain voices or views out of policy and practice debates.

What advice would I give to those driving reform?

- Do more to access teacher voices on the ground. For instance, in England, the Department for Education Teacher Voice Omnibus Survey, which is conducted every few years, would be even more useful if it included questions generated by teachers themselves.
- Be very cautious about 'edtech' solutions, as there is scant evidence to support many of their more extraordinary claims about how they can revolutionise and transform education. Those claims are good at grabbing media headlines – as with Sugata Mitra's 'Hole in the Wall' experiment, whose claims were subsequently debunked. Mitra's 'self-organised learning environment' (SOLE) or 'school in the cloud' model, which suggests that students can self-organise their own learning with minimal input from a facilitator (read 'teacher'), appears based on similarly limited evidence about comparative outcomes.

  One thing that's problematic in African contexts is the proliferation of 'edupreneurs' offering big returns from the latest technological advance despite thin evidence bases. As Larry Cuban has noted, there is often an inherent social and individual bias toward change, and toward technological change in particular.[20] But until something is proven to work, is it really worth investing in? For example, the 'iPad for every child' promised to schools in Los Angeles (USA) in 2013 sounded like a good idea at the time. But the $1.3 billion plan failed, with the school district subsequently requesting a refund.[21]
- Go for the low-hanging fruits – that is, make use of the latest offerings from cognitive psychology (particularly the work of Daniel Willingham and Dylan Wiliam and other learning scientists in the US). The progressive argument that learning was best done in a child-centred, enquiry-led manner may have been innovative and exciting when first written in the 19th and early 20th century by philosophers like Dewey, Pestalozzi, Froebel and so on, but no one should be taking these as serious empirical studies in the science of learning – rather, as interesting historical footnotes. Psychiatry has moved on since Freud, but in education, it seems, no idea is too unevidenced to venerate as long as it conforms to the establishment's treasured convictions and traditions.

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Embedding research-based effective pedagogy through continuing professional development

Ben Knight

Ben Knight is Director for Language and Pedagogy Research at Cambridge University Press, leading on high quality academic research to develop more effective learning materials and resources.

At Cambridge we have been working on extracting insights into effective continuing professional development (CPD) from the wide range of research projects being carried out around the world. Our objective is to use those insights to help schools and teachers ensure that CPD leads to improvements in learning for the students. To guide schools, teachers and ministries, we have summarised the key features of effective CPD – as identified in the research – into seven principles. These can be arranged into a handy acronym: INSPIRE.

Impactful

CPD programmes are most effective where there is a clear statement of what impact they aim to have – whether that is on the students' learning, or the teachers' behaviour.

Needs-based

It is essential for the programme to be designed around the needs of teachers, in their context. Teachers are time-poor and will quickly disengage if the CPD is not clearly applicable to their situation, or does not reflect their priorities and challenges.

Sustained

Many CPD activities are, in effect, a series of one-off sessions or events, which do not lead to deep and lasting changes in teacher cognition and performance. This is not simply about the length of time spent, but also the need for systematicity within the programme design – understanding how each session relates to each other and the overall purpose.

Peer-collaborative

Research has found that collaboration between teachers with regard to their professional development is one of the strongest indicators of success. As well as providing the support that teachers need during the long process of professional development, it also help the co-construction of understanding and practice that is important for individuals and the school as a whole.

In-practice

In the same constructivist approach to learning that underpins our learning programmes, it has been found that teachers who are able to apply their learning quickly within their own context are more likely to retain the benefits of the training and be able to transfer the learning to their contexts.

Reflective

Actual teaching practice is generally the outcome of deeply held views of what learning and teaching is, and so the process of improving practice benefits from a degree of critical reflection, which is important for professional growth.

Evaluated

It has been found that CPD programmes that track the impact of the training on key indicators are more likely to be sustained and to respond to the specific needs of the teachers and school. These indicators can focus on teacher behaviours, but need to include the impact on learning in order to get to the heart of CPD. This element of the CPD programme – the tracking and evaluation of impact – needs to be linked closely with the first point: what is the intended outcome of the programme?

This summary of best practice as evidenced in research projects and meta-analyses has been the basis for our Cambridge Teacher Development programmes in Cambridge ELT, and has been part of the service that we provide to ministries or schools around the world.

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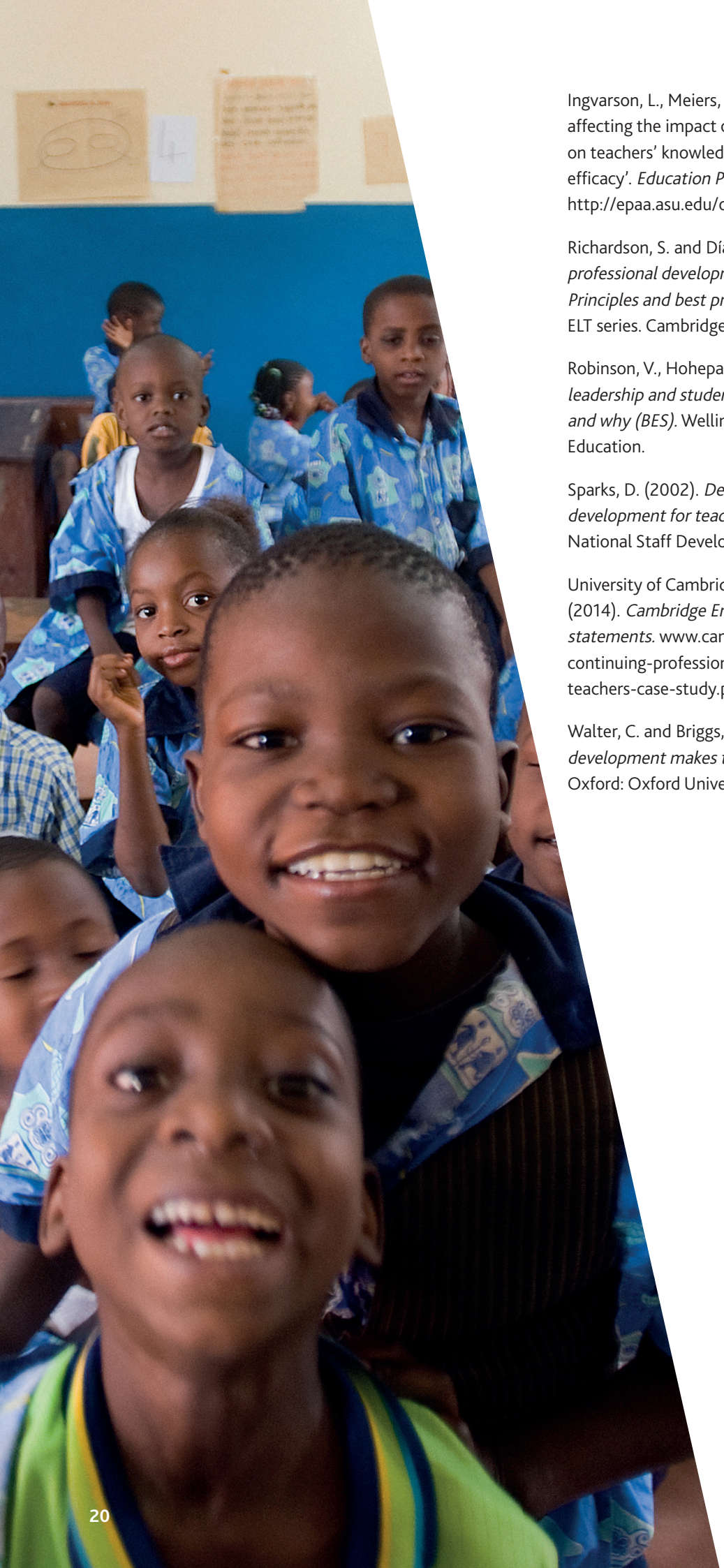

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How can we plan for teacher development?

Harry Fletcher-Wood

Harry Fletcher-Wood is Associate Dean at the Institute for Teaching.

We all want professional development to help teachers improve their work, but too many professional development initiatives have not led to lasting change in how teachers teach, or to lasting benefits for students. So how can we plan for teacher development?

Michael Young has argued that a good curriculum builds on neither a fixed body of knowledge, nor a technical group of competencies, but on subject disciplines. A discipline provides a body of knowledge to be learned – offering the curriculum a structure and a backbone. A discipline also offers flexibility: as researchers learn more, the discipline changes, and the curriculum can change with it.

In designing professional development for teachers, I would suggest structuring our work around three fields of study:

- Cognitive science – which offers an understanding of how students (and teachers) learn, and productive ways to teach.
- Deliberate practice – which offers an understanding of how we can design training and coaching to support teacher improvement.
- Behavioural psychology – which offers an understanding of how we can make professional development easy and tempting, and support teachers to change existing habits.

Each discipline helps us answer a crucial question in designing professional development:

1. How can teachers promote learning?
2. What training and support can prepare teachers to use the chosen approach?
3. How can we make change easy and tempting?

If we decided, for example, that students were struggling to follow teachers' explanations of difficult concepts, we might begin by identifying productive ways teachers can explain concepts – and choose to focus on giving concrete examples, and helping students to gain an increasingly abstract understanding of them. We might design training in which we support teachers to formulate explanations, practise them, and refine them with their colleagues' support. And we might then help teachers plan ways to remind themselves to use these prepared explanations when the moment comes.

This may sound simple: having designed our professional development, we need to find ways to ensure that it fits in among the many other pressures on the school. Professional development is just one of many influences on teachers: *A Cambridge Approach to improving education*[22] listed 13 control factors, including assessment, pedagogy, inspection and funding. We therefore need to design professional development which is both true to the disciplines informing it *and* feasible within the many other influences on teachers and schools.

Such an approach is grounded in what we know, is realistic about what can be done, and offers significant promise in supporting teacher development.

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Locally rooted, but globally minded: building a culture of self-improvement and collaboration

Professor Ee-Ling Low

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In the pursuit of a more successful and sustainable educational future, we must learn to learn the lessons that other education systems have to offer. The success of Singapore's education system comes from a culture of continuous self-improvement, investing in our teachers and placing them at the heart of education.

A culture of self-improvement

While Singapore has garnered attention for its place in international rankings, we never rest on our laurels because part of our success is driven by an ethos of continuous self-improvement.[23] One method of self-improvement is learning from top-performing nations across the globe, through research and evidence-informed studies. This leads to a more successful, challenging and sustainable educational future.

When adopting policies and initiatives from high-performing education systems, it's important to be locally rooted but globally minded. Singapore looks at the best practices of these systems and contextualises them to make it relevant to our children, schools, system and nation. Likewise, when we share our expertise and experience with other systems through our consulting arm, NIE International, we always recommend that rather than replicating the "Singapore" model elsewhere, they need to contextualise our best practices to suit their system so that local and cultural modes are respected.

There are, for example, successful policies that other education systems could adopt, and some that are dependent on Singapore's unique local environment. Elevating the professional status of teachers, investing heavily in teacher preparation and providing educators with autonomy are all transferable initiatives. However, our uniquely centralised-decentralised system, where there is centralised policy formation at the ministry level and decentralised autonomous decision-making at the school level, would be challenging to replicate. As such, when developing a culture of self-improvement, education systems must collaborate and share, but also respect each other's unique contexts. With this in mind, there are several initiatives that Singapore can share.

Investing in our teachers

One of Singapore's most successful and transferable initiatives is to raise the status of teachers by investing in their preparation and development. We recruit from the top 30% of each student cohort and the preparation of all student teacher is fully sponsored by the Ministry of Education (MOE) in our NIE future-ready programmes that are values rooted, knowledge rich and skills relevant. MOE has also invested in a premier Teaching Scholars Programme (TSP) for the top 15% of each cohort. Not only are Scholars of TSP fully sponsored at NIE, but they also receive paid accommodation on campus and funded international exposure, allowing them to attend international conferences and leadership courses. TSP is indicative of our commitment to raise the status of all teachers in Singapore.

The results of this investment have been positive. According to the Global Teacher Status Index (GTSI) 2018, 63% of Singaporeans say that students respect teachers, placing us 6th out of the 35 participating countries.[24] Elevating the status of educators and cultivating deep respect for the teaching profession has been a significant driver of Singapore's success. By investing heavily in recruiting, preparing and constantly developing teachers, we have positively impacted student learning outcomes. Furthermore, we provide teachers with multiple career pathways and continuous career-long professional development. This attracts the best and the brightest into the teaching profession and ensures that educators keep up to date with the latest research on good practice.

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Teacher autonomy

While teachers are evaluated based on national criteria, Singapore does not encourage a standardised teaching method. Teachers have the autonomy to choose the teaching method which best suits each student and their own personal preferences. This allows for fidelity and alignment to the common national vision for education, which is then customised to suit the needs of different students in each school.

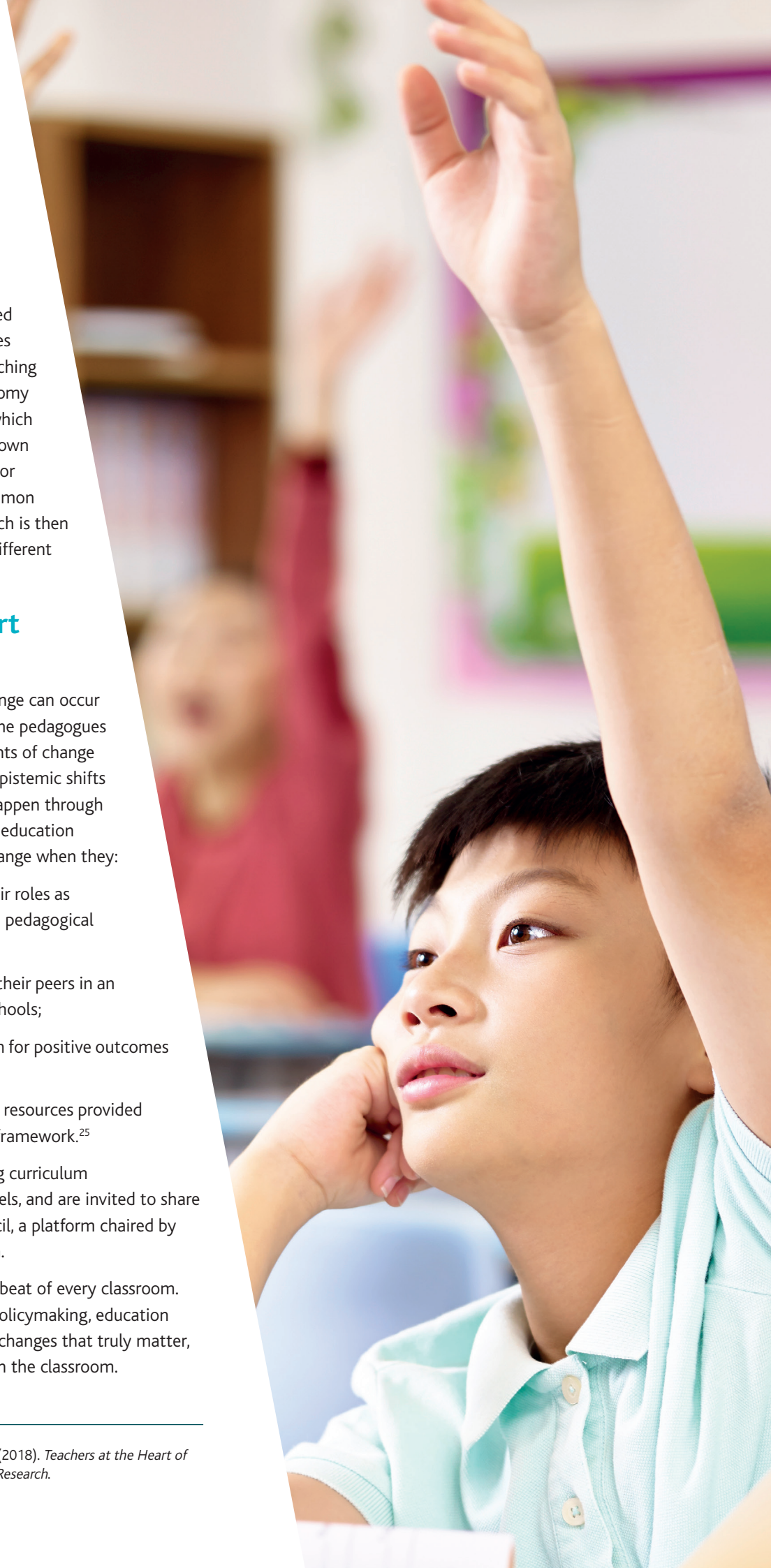
Teachers at the heart of education

We acknowledge that no real change can occur without teachers. They are both the pedagogues in the classrooms and crucial agents of change in the overall education system. Epistemic shifts in the system can and will only happen through them. As such, within Singapore's education system, teachers are agents of change when they:

1. understand and assume their roles as professionals and experts in pedagogical content knowledge;
2. share and collaborate with their peers in an active learning culture in schools;
3. develop a capacity to design for positive outcomes in teaching and learning;
4. and design and make use of resources provided within a strong curriculum framework.[25]

Teachers are also consulted during curriculum conceptualisation and review panels, and are invited to share their views at the Teachers' Council, a platform chaired by the Director-General of Education.

Ultimately, teachers are the heartbeat of every classroom. By putting them at the heart of policymaking, education systems will be able to make the changes that truly matter, which will benefit every student in the classroom.



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Bridging the gap between policy and practice

Based on an original submission from Dr. Folorunso Oyetola

Assistant Director of Education at Federal Ministry of Education Girls' College, Ipetu-Modu, Nigeria

When educational policies fail to reach the classroom, they fail to achieve their intended outcomes. As such, the current void between policy formation and successful implementation must be tackled. Firstly, when introducing a new initiative, policymakers must provide strategies that guide and support educators throughout the implementation process. Secondly, rather than expecting teachers to simply accept and apply new initiatives, policies must be composed with teachers' voices. Engaging educators, as the agents of change, will ensure that policies are successfully translated into practice.

The gap between policy and practice

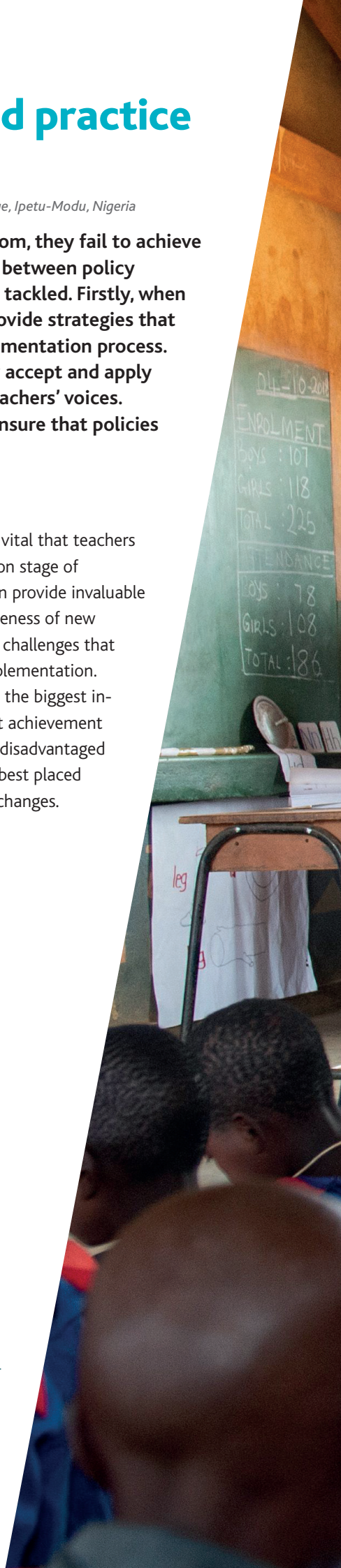
Educational policy implementation is the process of putting an idea or initiative into practice. As such, the fruits of educational reform are dependent upon successful translation into the classroom.[26] If policies fail to translate into programmes, processes and active participation, they fail to achieve their intended impact. Many factors can prevent effective policy implementation, but failing to engage teachers and disregarding the implementation process when forming policies are both avoidable obstacles.

Prioritising teachers within the implementation process

Questions such as 'do teachers have the skills and resources to teach this new curriculum change?' are often overlooked. Educational policies are frequently developed with little consideration of the practical mechanisms necessary for their implementation. As a result, expectations concerning educators' capacity to implement change often exceeds reality.[27]

The mismatch between reform and capacity has been encountered in Nigeria, where historically a lack of funding, quality teachers and teaching aids (projectors, computers, libraries, laboratories etc) has prevented the successful implementation of new policies. Without adequate teachers and resources, the implementation of new policies is highly challenging. It is therefore necessary to ensure that when designing and introducing educational reform, policymakers reflect upon the classrooms they're intending to change and create strategies for the implementation process itself.

With this in mind, it is also vital that teachers are involved at the formation stage of policymaking. Educators can provide invaluable insights into the appropriateness of new initiatives and the resource challenges that may prevent successful implementation. Furthermore, teachers have the biggest in-school influence on student achievement and learning, especially for disadvantaged students. As such, they are best placed successfully to implement changes.



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Cambridge works in partnership with governments and civil society organisations to offer holistic, end-to-end support in the development and delivery of education reform policy. We have been working with governments to make real change in education systems for all ages and contexts around the world for more than 100 years.

Our work includes designing and implementing programmes in curriculum, assessment, publishing, teacher training and raising standards of English language learning and teaching. We create coherent solutions that are scalable, sustainable and have a record of success. We develop knowledge and involve local teams in the capacity development process as well as support with communicating the education vision to local stakeholders.

As departments of the University of Cambridge we are committed to delivering the University's mission to contribute to society through the pursuit of education, learning, and research at the highest international levels of excellence.

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TRANSFORMING SOCIETIES THROUGH EDUCATION