WHAT WORKS BEST IN EDUCATION:
THE POLITICS OF COLLABORATIVE EXPERTISE

John Hattie
June 2015

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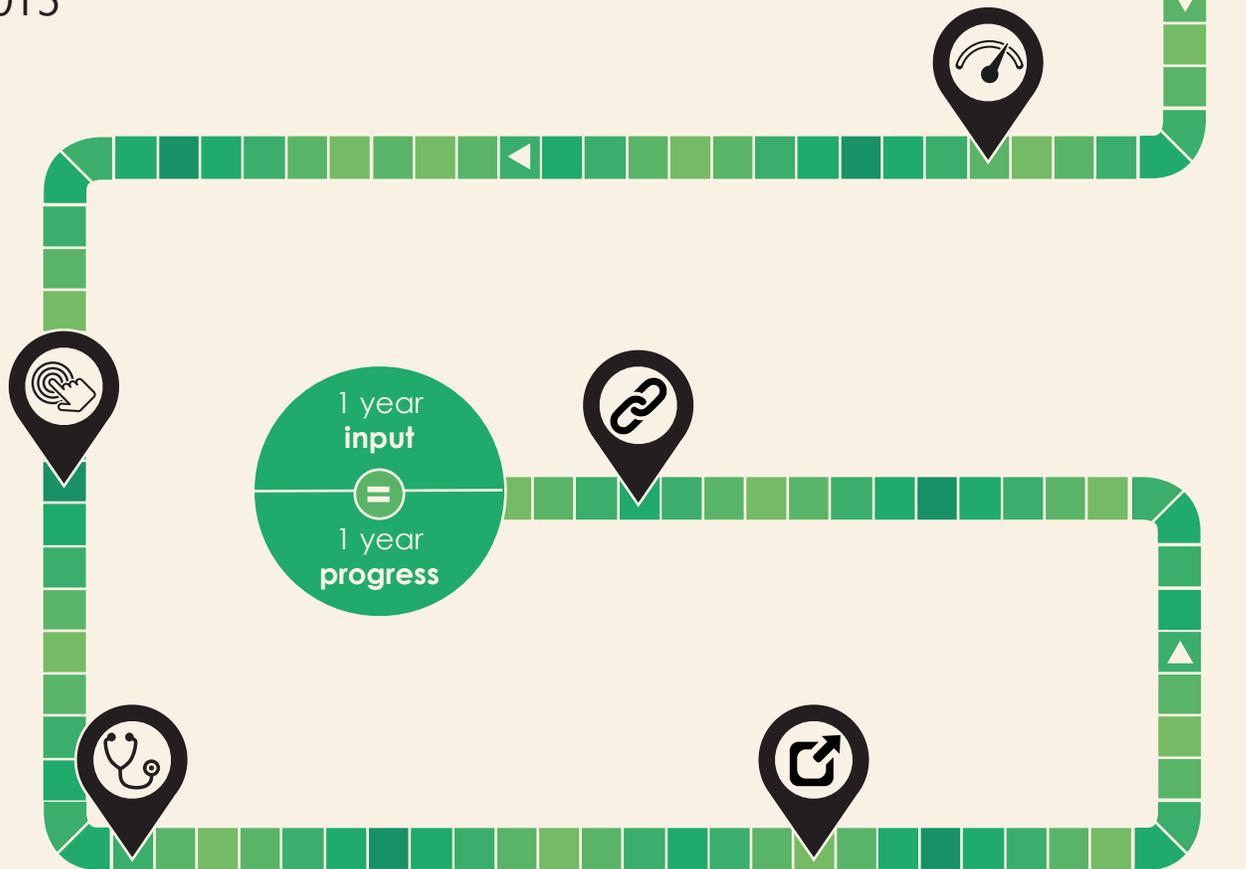
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What Works Best in Education:
The Politics of Collaborative Expertise

John Hattie

ABOUT THE AUTHOR

John Hattie is Professor and Director of the Melbourne Education Research Institute at the University of Melbourne, Australia, and Deputy Director of the Science of Learning Research Centre. He is the author of *Visible Learning* and *Visible Learning for Teachers*, the co-author (with Gregory C. R. Yates) of *Visible Learning and the Science of How We Learn* and co-editor (with Eric Anderman) of *The International Guide to Student Achievement*.

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FOREWORD

It is rare – too rare – for academics to be involved in both the battle for ideas and the day-to-day task of changing what goes on in real schools. John Hattie is an exception, someone who can link his extraordinary mastery of the evidence base with the insights he has gained through working with hundreds of schools under the Visible Learning banner. That's a rare expertise, and one that is on full display here.

In a companion paper (*What Doesn't Work in Education: The Politics of Distraction*), John set out a long list of policy prescriptions which, he argues, are unlikely to have the impact we are looking for. This is that every student, irrespective of where they are starting from, makes at least a year's worth of progress for a year's worth of input. John's objective in this paper is to set out how we can achieve this goal.

His starting point is that the variability between schools in most Western countries is far smaller than the variability within schools, or, more simply, that it matters much more which classroom you go to than which school. Which takes us directly to the question of how to increase the expertise of all teachers …

At the heart of John's answer is the notion of collaborative expertise, of all parts of the education system working to the above goal, knowing their impact and reacting accordingly. It involves collaboration horizontally (from teacher to teacher, from school to school) and vertically (from teacher to school leader to policy-maker).

There is much to recommend in John's detailed proposals: teaching does need to become a true profession, with defined ways of describing and analysing impact. We do need more assessment devices that can be used as part of the ongoing process of learning, and, yes, surely, we need to move away from the existing model of students moving in lockstep through content irrespective of how successfully they have learnt the previous lesson.

The challenge this poses, however, is how far teacher expertise alone will get us to where we want to be. In this paper, John himself gives an insight into the complexity of what we are asking teachers to achieve:

> *It is simple: to be able to make speedy and correct decisions on a moment-by-moment basis, to be able to know 'where to next' for twenty to forty students almost simultaneously, to know how to reliably diagnose and implement multiple teaching interventions and how to evaluate impact of teaching on learning requires high levels of expertise, as does ensuring that these decisions have common meaning across teachers and schools.*

It does require high levels of expertise. But high levels of teacher expertise supported by the capacity of technology is maybe our most promising route to that. Like all John's work, this paper prompts the right questions and starts the right debates. It also demonstrates a gift for a telling phrase, a welcome robustness and an elegant manner of orchestrating the available evidence. He wears his learning well.

Michael Barber

1. INTRODUCTION

In a previous paper, *What Doesn't Work in Education: The Politics of Distraction*, I argued that the aim of schooling is for every student to gain at least a year's worth of learning for a year's input. I further argued that many policy-makers and systems are persistently drawn to the wrong kind of education interventions – distractors that will not help us realise this ambitious aim. From new types of schools to getting more adults into them, we need to declare these 'fixes' distractors and move to more fertile territory.

What we need instead is a defensible and compelling narrative that leads to long-term, coherent and focused system-wide attention on student learning. I call this territory 'the politics of collaborative expertise'. Its premise is that there is differential expertise across our schooling system and that there can be wide variation within schools. At the same time, there is a remarkable spread of expertise that can be identified, nurtured, esteemed and brought together to reduce this variance.

The aim of this paper is to begin describing what a model of collaborative expertise would look like and what we need to get done to make it a reality.

THE LARGEST BARRIER TO STUDENT LEARNING: WITHIN-SCHOOL VARIABILITY

If we are to truly improve student learning, it is vital that we identify the most important barrier to such improvement. And that barrier is the effect of within-school variability on learning. The variability between schools in most Western countries is far smaller than the variability within schools (Hattie 2015). For example, the 2009 PISA results for reading across all OECD countries shows that the variability between schools is 36 per cent, while the variance within schools is 64 per cent (OECD 2010).

There are many causes of this variance within schools, but I would argue that the most important (and one that we have some influence to reduce) is the variability in the effectiveness of teachers. I don't mean to suggest that all teachers are bad; I mean that there is a great deal of variability among teachers in the effect that they have on student learning. This variability is well known, but rarely discussed, perhaps because this type of discussion would necessitate potentially uncomfortable questions. Hence, the politics of distraction are often invoked to avoid asking them.

OVERCOMING VARIABILITY THROUGH COLLABORATIVE EXPERTISE

There is every reason to assume that by attending to the problem of variability within a school and increasing the effectiveness of all teachers there will be a marked overall increase in achievement. So the aim is to bring the effect of all teachers on student learning up to a very high standard. The 'No Child Left Behind' policy should have been named 'No Teacher Left Behind'.

This is not asking teachers and school leaders to attain some impossibly high set of dream standards; this is merely asking for all teachers to have the same impact as our best teachers. Let's consider some analogies: not all doctors have high levels of expertise, and not all are in an elite college of surgeons; not all architects are in royal societies; and not all engineers are in academies of engineers. Just because a doctor, architect or engineer is not a member of these august bodies, however, does not mean that they are not worth consulting. They may not have achieved the upper echelon, but they will still have reached a necessary level of expertise to practise.

Similarly, the teaching profession needs to recognise expertise and create a profession of educators in which all teachers aspire to become members of the college, society or academy of highly effective and expert teachers. Such entry has to be based on dependable measures based on expertise. In this way, we can drive all upwards and not only reduce the variability among teachers and school leaders but also demonstrate to all (voters, parents, politicians, press) that there is a 'practice of teaching'; that there is a difference between experienced teachers and expert teachers; and that some practices have a higher probability of being successful than others. The alternative is the demise of teacher expertise and a continuation of the politics of distraction.

So, my claim is that the greatest influence on student progression in learning is having highly expert, inspired and passionate teachers and school leaders working together to maximise the effect of their teaching on all students in their care. There is a major role for school leaders: to harness the expertise in their schools and to lead successful transformations. There is also a role for the system: to provide the support, time and resources for this to happen. Putting all three of these (teachers, leaders, system) together gets at the heart of collaborative expertise.

2. BUILDING COLLABORATIVE EXPERTISE: A TASK LIST

There are a number of specific tasks to be undertaken to set the conditions for collaborative expertise, first of which is the absolutely critical need to shift our narrative about teaching and learning.

Task #1:
SHIFT THE **NARRATIVE**
to collaborative expertise
and student progression

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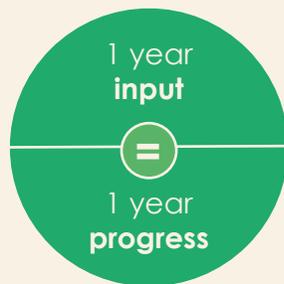
TASK 1: SHIFT THE NARRATIVE

From 'fixing the teacher' to collaborative expertise

The current debate is very much focused on the 'teacher', but such an approach places too much responsibility on one person. It falsely implies that if only we can 'fix the teacher', all will be well; it ignores the many other influences and conditions of success outside the control of the individual teacher. There is no way that a system will make an overall difference to student achievement by working one teacher at a time.

Instead, the onus needs to be on everyone working collectively to improve student achievement: the teachers, the school leaders, the other adults in the schools (such as teaching aides), the parents (and voters), the policy-makers and the students.

From standards and achievement to progression

Perhaps most urgent is the need to reframe the narrative away from standards and achievement and to move it towards progression. This is not to say that high achievement and high standards are not desired, but the way to get there is through a narrative focused on progress. Many Western countries have an obsession with 'value added', and this is a powerful and worthwhile statistical method aimed to evaluate progress. There are many value-added models, and they should be used as part of the arsenal to measure progress. However, too often they are used to make causal claims, to make claims related to one source such as 'a teacher' and are not triangulated with other evidence of progress.

There are many other ways for teachers and school leaders to document progress in learning; and there are many other critical outcomes besides the usual academic measures that matter. As I argued in my previous paper, the measure of progress needs to be framed as 'at least a year's growth for a year's input' or 'every child deserves at least a year's growth for a year's input'.
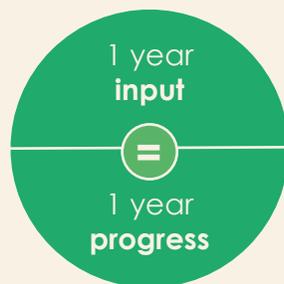
Let's move to the other tasks at hand…

Task #2:
AGREE ON WHAT A YEAR'S PROGRESS LOOKS LIKE

across all subjects, schools and system levels

1 year **input**

=

1 year **progress**

TASK 2: SECURE AGREEMENT ABOUT WHAT A YEAR'S PROGRESS LOOKS LIKE

There needs to be debate and agreement among educators about what a year's progress looks like. It may be easier in some subjects than others. For example, when I analyse many countries' national or standardised tests in reading and numeracy, the typical growth effect-size per year is about 0.40 (higher in earlier years and lower in high schools). This average of 0.40 can be used, among other indicators, as an expected level of growth per year – with the usual cautions about context. So, in this sense, we can begin to know what an average year's progress should look like.

In subjects such as arts, music and physical education (where there is a history of fewer standardised measures calibrated over time), it is worth conducting standards-setting sessions with teachers as this can lead to decisions about expected yearly growth. For example, teachers could be asked to bring two anonymous pieces of student work showing growth over three-plus months. They would then be asked to place the work along a curriculum-year line and have a robust discussion about progression based on the teachers' judgements of growth and whether this progress is sufficient. This can lead to healthy debates about 'what it means to be good at –' and the development of a common conception of progress among teachers.

Indeed, this development of a common conception of progress is the key to accelerating progress. When teachers have different conceptions or expectations about what 'challenge' in the curriculum means, this can

have a profound negative impact on students. If, for example, a teacher of a Year 6 class has a lower expectation of progress than a Year 5 teacher, it is highly likely that the students in the Year 6 class will not advance as much as in the Year 5 class – contributing to the lack of progress.

One of the major advantages of benefiting from the collective wisdom of all teachers and school leaders in and across schools is that this can reduce the variability in teachers' understanding of challenge and progression for students. For example, New Zealand secondary-school teachers were thrust into a major dilemma when the high-stakes examination system was dramatically changed. It took some years of disasters before appropriate moderation was introduced, with worked examples for all units of work (and a description of why a piece of work was rated Excellent rather than Merit, Merit rather than Achieved, and so on).

Now, despite the remarkable diversity across the country, it is possible to go into any secondary school in New Zealand and there is confidence in the comparability of how teachers evaluate challenge and progress – and there has been a steady increase in the percentage of students attaining the qualification. This is a major credit to teachers', school leaders' and system professionalism and their commitment to work together to resolve an important issue.

In the past few years, New Zealand has undertaken a similar shake-up in the primary-school years. The premise of the system is that the day-to-day decisions teachers make in

their judgements about performance are the critical unit of interest. Teachers are asked to account for their 'overall teacher judgements' in the major domains – if they rely solely on tests, they fail; if they use no tests they fail – they must defend their day-to-day judgements about the interpretation of the meaning and consequences of evidence from multiple sources. The data show the remarkable inconsistency in these judgements. New Zealand now faces a decision: blame the data, hide it and go back to personal and unique judgements, or do the same as was done in the secondary schools and introduce moderation, worked examples and collaboration to decide what it means to progress across different levels of the curriculum.

Figure 3.1 is one way to illustrate the importance of the progression notion. The y-axis depicts achievement, and the line in the middle is some agreed benchmark of achievement (e.g., at or above standard). The x-axis depicts progress, and the line in the middle is some agreed benchmark of progress (e.g., effect-size of .40, average within the school). Schools (and classes, and students) can then be placed into one of these quadrants.

For example, across all secondary schools in Victoria (Australia), 27 per cent are cruising (high achievement but limited progress), 10 per cent are growing (high progress but limited achievement), 18 per cent are low progress and low achievement, and 45 per cent are in the optimal zone (more than average achievement and more than a year's growth for a year's input).

Students can be located on the same grid. This shows why a one-policy-fits-all approach is unlikely to work: schools, teachers and students in each cell are likely to have different trajectories to move into the optimal zone. In one jurisdiction where I analysed all their school onto this matrix, it was discovered that the city schools where most country parents sent their children to board were in the 'cruising' zone, whereas their local schools were 'growth' schools. Parents had been conned

Figure 3.1   A two-by-two diagram illustrating the notion of progression and proficiency.
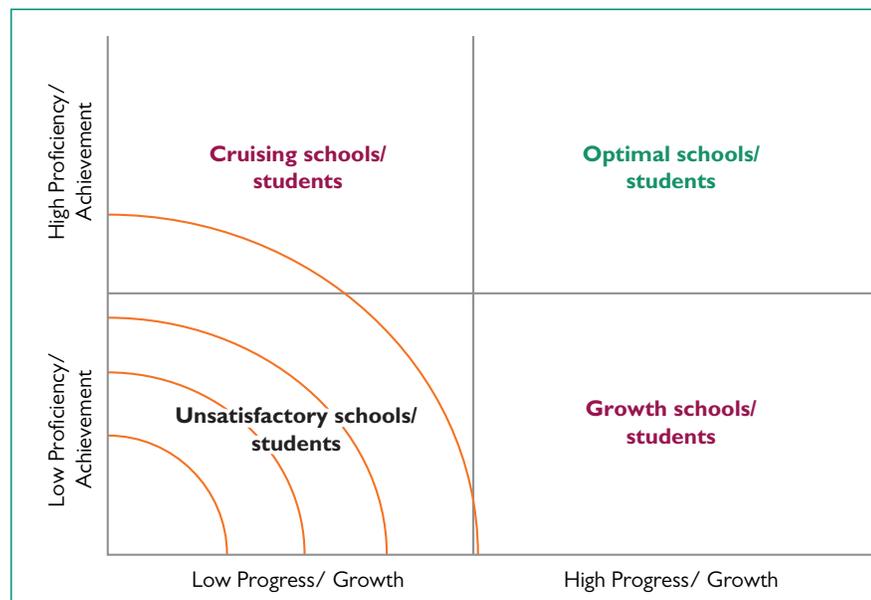
into thinking the 'better schools in the city' were more effective than their local schools because they viewed high-achieving schools as more powerful than schools that could progress students at a faster rate of learning.

In another example, I visited a Victoria school that for the past four years had been in the top five growth schools in the state. Yes, it was in a lower socio-economic area and the average achievement scores were not above the state mean, but it was doing well. Unfortunately, the next principal was only able to see the 'low achievement', not the tremendous growth, and was set on dismantling the remarkable success of the school.

Task #3:

EXPECT A YEAR'S WORTH OF **PROGRESS**

by raising expectations that
all students can achieve

1 year **input**
=
1 year **progress**

TASK 3: EXPECT A YEAR'S WORTH OF PROGRESS

In the course of my Visible Learning research, I have found that the greatest influence on learning is the expectations of the students and the teachers. Further, recent research by Rubie-Davies (2014) shows that a teacher typically has high, medium or low expectations for all the students in their class, with the students of high-expectation teachers being very successful in achieving their teachers' expectations and the students of teachers with low expectations being similarly successful at making lower gains.

It is unfortunate that by the age of eight so many students have learned their place in the achievement hierarchy of the classroom and are satisfied to keep achieving at that level in the hierarchy. If they received a C grade last time, they expect (as do many of their teachers) to keep achieving a C grade. It should be a major role of schools to assist children in exceeding their expectations.

Consider those teachers who had a positive and memorable impact on you when you went through school. I have asked many audiences this question, and the modal answer is about two (and you had about forty to fifty through primary and secondary school, so this low number should bother our profession). Now, why did those two have such an impact? Typically it is because they wanted to turn you on to their passion (whether it was literature, maths or music), and, through this passion, they saw something in you that you may not have seen in yourself. Through them you were able to learn and go beyond what you thought you could achieve. These teachers help us raise and exceed our expectations, which helps turn us on to learning.

Task #4:
DEVELOP NEW **ASSESSMENT** AND **EVALUATION** TOOLS
to provide feedback to teachers

1 year
input

=

1 year
progress

TASK 4: DEVELOP NEW ASSESSMENT AND EVALUATION TOOLS TO PROVIDE FEEDBACK TO TEACHERS

We need to understand teacher and student expectations, to ensure they are appropriately high – and then to provide teachers with decent assessment and evaluation tools to help them set and evaluate these expectations. One example of this form of assessment is a tool my team created, the New Zealand e-asTTle tool (http://e-asttle.tki.org.nz). With this tool, teachers create tests from an item bank that relates to what they are currently teaching.

We developed the tool by starting backwards: designing the reports for teachers and school leaders to inform them of their impact and where to go next in their teaching. The two questions that drove this development were, 'What do you see?' and 'What would you do next?' For the first question, if the teacher, school leader, parent or student did not see what we wanted them to see, or interpreted the report incorrectly, we redesigned the report; likewise, we redesigned the report if the response to the second question was that there were no consequences for the teacher or school. After we developed these reports, we backfilled them with the appropriate and desirable psychometric attributes.

All items are calibrated on the same scale, and the developed tests are designed to take account of the following features:

- the proportion of surface and deep processing required;
- desirable psychometric properties;
- the curriculum;

- teachers' perceived estimates of how difficult a student would find the task; and
- the time available.

Each test includes a set of attitude and achievement attributes and can be administered when and how the teacher wishes (e.g., paper, on-screen, adaptive). Most critically, there are instantly available reports tailored to tell the teacher who they have had impact on, in what way and the magnitude of success. It is a voluntary system and still widely used throughout the country fourteen years after introduction. Teachers are hungry for feedback about their impact.

We need more research on how to create reports drawn from test results which teachers and students can interpret accurately, and which teachers can use to work out what their next teaching interventions should be. We also need to move beyond a debate that is too obsessed with measuring achievement.

We have many achievement measures; we would do well to augment this arsenal with more measures of learning, such as the extent to which students can engage in collaborative problem-solving, deliberate practice, interleaved and distributed practice, elaboration strategies, planning and monitoring, effort management and self-talk, rehearsal and organisation, evaluation and elaboration and the various motivational strategies – the 'how to' aspects of learning.

Task #5:
KNOW THY **IMPACT**!

by taking responsibility for the impact of everyone in the school on the progress of students

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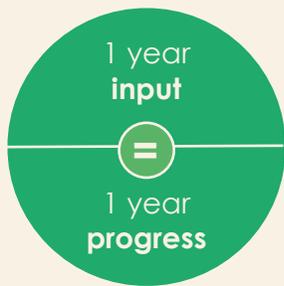
TASK 5: KNOW THY IMPACT!

The model advanced here is that the school leader is responsible for asking on a continual basis about the impact of all the adults on the learning of the students. Of course, I am not forgetting that the students are players in improving their learning. But that is the bonus, the compound-interest component. What is requested is that school leaders become leaders in evaluating the impact of all in the school on the progress of all students; the same for teachers; and the same for students.

School leaders need to be continually working with their staff to evaluate the impact of all on student progression. Leaders need to create a trusting environment where staff can debate the effect they have and use the information to devise future innovations. And leaders need to communicate the information on impact and progression to the students and parents. Schools need to become incubators of programs, evaluators of impact and experts at interpreting the effects of teachers and teaching on all students.

In short, we need to develop an evaluation climate in our education system.

Experience has shown that ten- to twelve-week cycles of evaluation are about optimal. Fewer weeks tend to lead to over-assessment or insufficient time to detect change; more weeks and the damage or success is done. We should know this and react appropriately. It does mean asking teachers to be clear about what success or impact would look like before they start to teach a series of lessons.

Developing a culture of evidence

Janet Clinton and I have used the theories of empowerment evaluation to spell out many of these mind frames (in Clinton and Hattie 2014). Empowerment evaluation is based on the use of evaluation concepts, techniques and findings to foster improvement. It increases the likelihood that programmes will achieve results by increasing the capacity of stakeholders to plan, implement and evaluate their own programmes. We argued that we need to teach educators:

- to think evaluatively;
- to have discussions and debates in light of the impact of what they do;
- to use the tools of evaluation in schools (such as classroom observations of the impact of teachers on students, interpreting test scores to inform their impact and future actions, and standard setting methods to clarify what challenge and progression should look like in this school);
- to build a culture of evidence, improvement and evaluation capacity-building;
- to develop a mind frame based on excellence, defined in multiple ways, and for all;
- and to take pride in our collective impact.

Empowerment evaluation helps to cultivate a continuous culture of evidence by asking educators for evidence to support their views and interpretations and to engage in continual phases of analysis, decision-making and implementation.

Of course, this must start by asking the questions, 'Impact on what? To what magnitude? Impact for whom?' Evaluating impact requires analyses of what a year's growth looks like, and it is likely it may differ depending on where the student begins in this growth. Evaluating impact asks schools and systems to be clearer about what it means to be good at various disciplines, to be clearer about what a year's progress looks like and to provide staff with collaborative opportunities to make these decisions.

This is the hardest part of our work, as teachers we have been so ingrained to wait and see what the students do, to see which students attend and then to pick out examples of successful progress. Our alternative model asks that teachers be clearer about what success would look like and the magnitude of the impact, and we ask them to prepare assessments to administer at the end – before they start teaching. The bonus of this latter preparation is that it ensures that teachers understand what success is meant to look like before they start teaching, and it increases the likelihood that teachers communicate these notions of success to the students.

There is also a need to include the student voice about teacher impact in the learning/teaching debates; that is, to hear the students' view of how they are cared about and respected as learners, how captivated they are by the lessons, how they can see errors as opportunities for learning, how they can speak up and share their understanding and how they can provide and seek feedback so they know where to go next. As the Visible Learning research has shown, the student voice can be highly reliable, rarely includes personality comments and, appropriately used, can be a major resource for understanding and promoting high-impact teaching and learning.

Task #6:
ENSURE TEACHERS HAVE EXPERTISE IN **DIAGNOSIS**, **INTERVENTIONS** AND **EVALUATION**

through teachers working together as evaluators of their impact on their students

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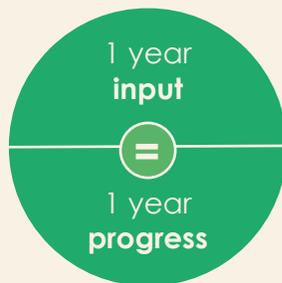
TASK 6: ENSURE TEACHERS HAVE EXPERTISE IN DIAGNOSIS, INTERVENTIONS AND EVALUATION

Recall that the average effect size of a year's progress is d = 0.40. When the various education interventions we have reviewed in our Visible Learning work are considered, the most significant comes from teachers, with many achieving a much greater effect than a year's growth for a year's input, including:

- working together to evaluate their impact (0.93);
- moving from what students know now towards explicit success criteria (0.77);
- building trust and welcoming errors as opportunities to learn (0.72);
- getting maximum feedback from others about their effect (0.72);
- getting the proportions of surface to deep learning correct (0.71);
- using the Goldilocks principles of challenge (the challenges must be not too big, not too small but just right); and
- using deliberate practice to attain these challenges (0.60).

To get these effects requires listening to the learning happening in the classroom. It requires less talk by teachers and more listening to student dialogue; it requires more evaluation of surface and deep understanding and knowing when to move from one to the other; and it requires teaching that builds on a deep understanding of what students already know.

The underlying philosophy for such teachers can be summed up by the phrase 'Teachers are to DIE for!', that is, teachers need to be expert at 'Diagnosis', 'Interventions' and 'Evaluation'. To be expert at diagnosis requires understanding what each student brings to the lesson, their motivations and their willingness to engage. To be expert at interventions requires having multiple interventions so that if one does not work with the student, the teacher changes to another. It also involves knowing the interventions that have a high probability of success, knowing when to switch from one to another and not using 'blame' language to explain why a student is not learning. To be expert at evaluation requires knowing the skills of evaluating, having multiple methods and working collaboratively and debating with colleagues to agree on the magnitude of the effect needed for an intervention to be successful.

If students are not learning, then it is because we are not using the right teaching strategies; and we have to make the changes to these strategies. Such a philosophy places a number of demands on our teachers, namely that they have a high level of cognitive decision-making skills; that they are able and willing to say 'I was wrong in my choice of method of intervention and need to change what I do or to say' or 'I was right in my choice of interventions as they led to me successfully teaching these students'; and that they engage with others in collaborative inquiry about their diagnoses, interventions and evaluations – based on the evidence of their impact.
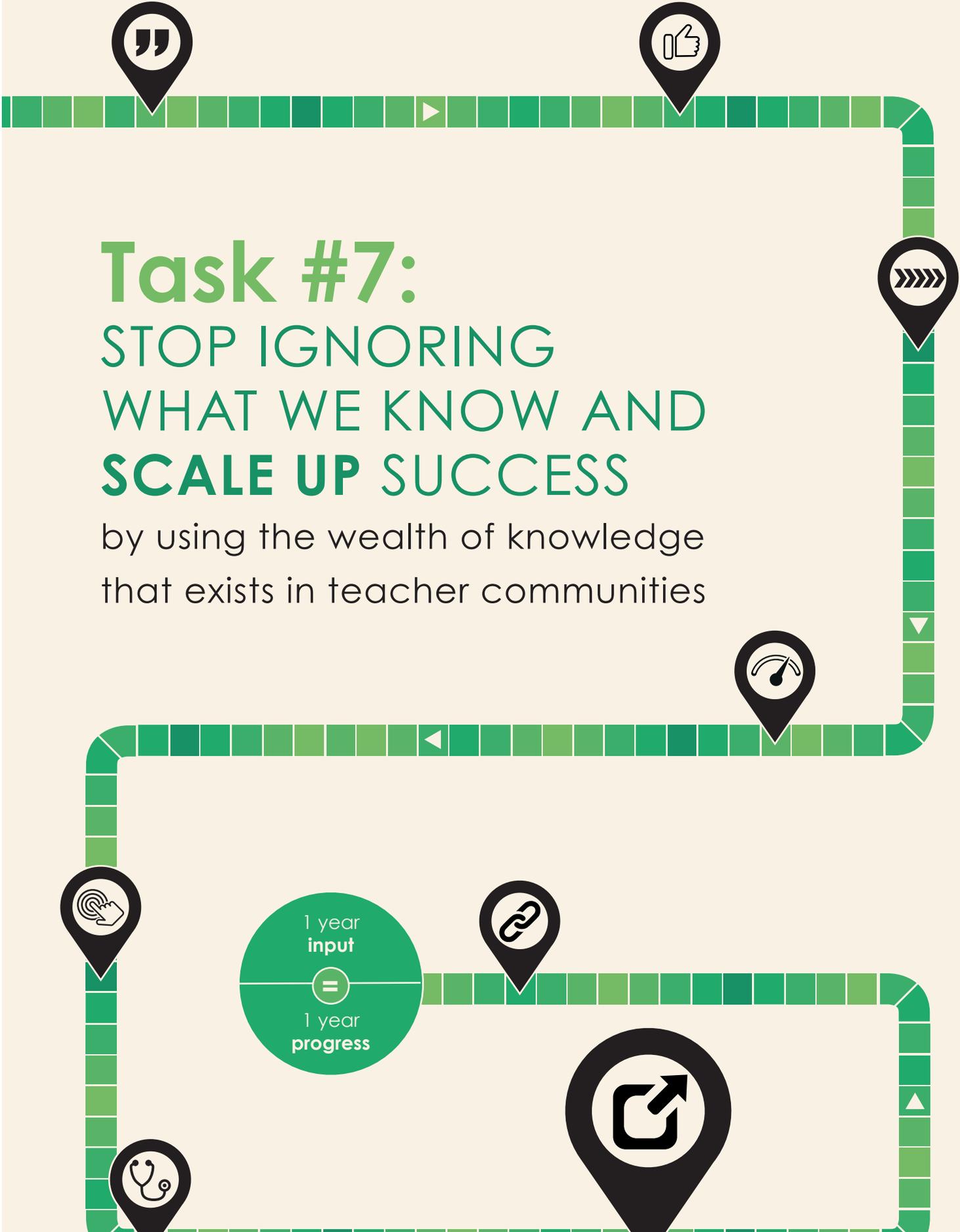
Task #7:
STOP IGNORING WHAT WE KNOW AND **SCALE UP** SUCCESS
by using the wealth of knowledge that exists in teacher communities

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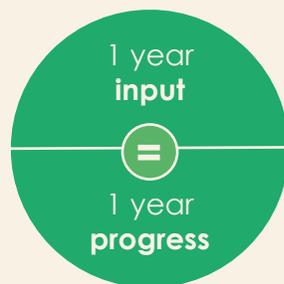
TASK 7: STOP IGNORING WHAT WE KNOW AND SCALE UP SUCCESS

At the start of the next school year, millions of children will start school for the first time. It is difficult to imagine that this means that there are millions of unique reading or numeracy problems among these children. But that is how most schools work: each teacher claims their children and their class is unique, that a student's reading or numeracy problems are unique to that student and that there is an almost infinite number of methods claimed as the best for addressing the problems.

Imagine we had a profession of doctors who believed that every case of leukaemia was unique. Of course, each case is – but there is also a body of evidence on the best treatment, on how cancer develops, how to adjust the treatment over time and how to build case lore about the best interventions (and reactions to interventions). There is already an understanding that we can depend on.

One of our major limitations in education is that we have little interest in scaling up successful ideas, preferring to argue that 'my class is unique'. But we do, in fact, know a lot. It is as if, every decade or so, we rediscover successful notions and repackage them with new labels. It just cannot be that every teacher is unique; it just cannot be that every student is unique; it just cannot be that we do not know successful practices that have high probabilities of success (and some with low probability of success). But our profession moves in this manner. The need for stronger research, development and evaluation and their integration into professional training, development and certification is clearly critical to not only develop success but to know success.

Perhaps licensing models (or the more disliked word 'franchising') may be worth investigating to see if such a model can reduce the inefficiency of rediscovery of what does, and what does not, work best to support learning. There are already successful licensing examples such as Reading Recovery, Success for All, Te Kotahitanga, Direct Instruction and the Abecedarian pre-school programmes – and, while they are not perfect, they have long track records of successful implementation and diffusion.

There have been so many teachers who have contributed to the development of these packages, they have been subjected so often to evaluation, and they have built up a wealth of knowledge about when to apply them, with whom, how to adapt them and so on. We would be simply foolish to ignore this.

Task #8:
LINK AUTONOMY TO A YEAR'S PROGRESS

by studying teachers who are achieving a year of student progress and supporting teachers who aren't

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1 year **progress**
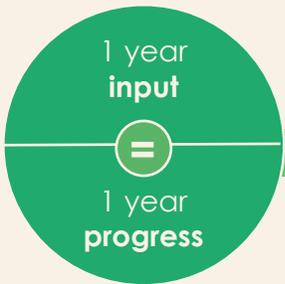
TASK 8: LINK AUTONOMY TO A YEAR'S PROGRESS

It is a myth that all teachers are equal in their impact on student learning: every student knows this, every parent knows this, and every teacher knows this. But so much of our policy development, our rhetoric and our school discussions are based on this myth. The key is to challenge the myth without causing a negative backlash, to promote a profession that can grow in expertise and to capture the high ground of teaching as a profession that demands expertise.

Where teachers are enabling all students to gain at least a year's growth for a year's input, they should be given some autonomy, which they have earned. While there should never be freedom to teach 'how you wish' (any more than there is freedom to do surgery in any way you wish), such high-impact teachers should be studied to understand why they are so effective. My Visible Learning research has shown that such teachers have particular mindsets that are worth understanding and spreading.

But if there is less than a year's growth, we need to question the autonomy these teachers have. Here is where the collective wisdom of the best in the school and community of schools needs to be used, where professional learning based on the understanding of effectiveness needs to be delivered, where adherence to best-available-impact evidence is to be used, where evidence-based curriculum progression maps are needed, and where quality evaluation of teacher effectiveness needs to be promoted and used. Yes, the essence of many

teachers' sense of professionalism is their autonomy to teach as they wish. But they do not have a right to such autonomy if they are not systematically teaching in a manner where the majority of their students gain at least a year's progress for a year's input.

The intention is not to create a binary system where some teachers can do whatever they want and others have little or no autonomy. Instead it is to create a system where leaders know their high-impact teachers so that they may create a coalition of the successful who can work together on reducing within-school variability.

Further, the implication is not that we should identify teachers who are producing less than a year's growth for their students and fire them, or identify the bottom 10 per cent and fire them (if such a policy were successful there would still be a bottom 10 per cent). Rather, we need to recognise effectiveness among teachers and build a profession that allows all to join the successful.

3. THE IMPLICATIONS OF COLLABORATIVE EXPERTISE

WHAT THIS MEANS FOR TEACHERS

Teaching can be a lonely profession. A teacher is placed in a room with a closed door with twenty to forty young people and expected to work alone to make a difference. Yes, in the past decade we have been adding more adults (usually para-professional or minimally trained) into the classroom (with little change in impact). Yes, teachers consider that the essence of their professionalism is tied up with their autonomy to choose how they teach. Yes, teachers pride themselves on their unique abilities to deal with the local conditions of their classrooms (as if all education is local). Yes, we create staffrooms for teachers to work and debate together, but the discussions are typically dominated by curriculum, students and assessments – rarely by learning, and even more rarely by the impact of teaching on student learning. There is almost a conspiracy in saying 'I acknowledge that you teach differently from me, and I respect that', which is code for 'Just leave me alone.' But we need to change.

We must stop allowing teachers to work alone, behind closed doors and in isolation in the staffrooms and instead shift to a professional ethic that emphasises collaboration. We need communities within and across schools that work collaboratively to diagnose what teachers need to do, plan programmes and teaching interventions and evaluate the success of the interventions. We need communities that promote and share professional development aimed at improving teacher effectiveness and expertise, that devise performance 'dashboards' to show success in learning and achievement and that build a coalition of the successful.

We need strong research, development and evaluation systems to ensure practice is grounded in reliable evidence. Just bringing teachers together will not in itself necessarily lead to good practice. Moreover, it helps when students know the narrative of working collectively and are complicit in the development of their own learning, but if they are not so disposed it is our role to teach them.

Too often attempts at collective action lead to forming groups, such as professional learning communities or networks of schools, but the focus of these groups is rarely on sharing evaluative evidence and thinking about what has been effective and even less on dependably identifying success and expertise and then privileging and sharing it. Too often, collaboration is about sharing resources, sharing anecdotes and war stories and sharing beliefs about why or why not something might work in 'my' context.

The focus of collaboration needs to be on the evidence of impact, common understandings of what impact means, the evidence and ways to know about the magnitude of this impact and how the impact is shared across many groups of students. And once this is established, the focus should shift to the nuances, the mediators and the incremental changes needed to adopt and implement these methods that maximise impact in each context.

Such a community, based on expertise, can lead to the development of a profession of educators. Led by instructional leaders, the community would aim to have teachers sharing and learning how to become more expert. This professional community would enhance equity so that everyone can aim for excellence, make schools inviting places to learn for all and develop the conditions (trust, leadership, passion and success) for collaboration to maximise the impact on learning.

WHAT THIS MEANS FOR SCHOOL LEADERS

This is where school leaders play a critical role. They must have the expertise to enable teachers to work collaboratively and question their effectiveness. The school leader must have the expertise to create opportunities, develop trust, provide the resources needed to understand the impact on students of all the teachers (and their own impact as school leaders) and to lead these discussions among the teachers. The leader's role is to seek the answers to two major questions:

1 What is the evidence that each student is gaining at least a year's progress for a year's input in every subject?
2 What is the school doing in light of this evidence?

School leaders may find that they need to bring in an evaluation expert to help judge the quality of the evidence and the quality of the consequential decisions, and the system should answer these two questions with clear curricula, support for multiple assessment methods and standard-setting methods for schools to ensure there are common conceptions of progress. But the debate about the evidence of effectiveness needs to be conducted among the teachers since they are the ones making the moment-by-moment decisions about diagnoses, interventions and evaluation in the classroom.

Bypassing teachers in this process, as so many do in building their accountability systems, will have little effect on these important classroom decisions. Instead, the fundamental business of school leaders should be to ensure that there are appropriate conceptions of challenge, agreed conceptions of progress and well-evidenced agreements about the appropriate magnitude of the required effect size. As Ronald Reagan said, 'trust but verify'.

The need for a climate of trust in the staffroom is obvious if the profession is to be based on collaboration. Teaching is never a smooth, linear process, and neither is learning. If teachers are to acknowledge success or otherwise in their interventions, there can be no whiff of accountability based on student test scores; instead, the staffroom needs to be a professional

community of scholars working together to maximise each other's success.

There can be many reasons for failing to have an impact, and no single reason fits all situations. But a common reason is failure to implement an intervention. There are so many instances in education of great policies but poor implementation (see Barber et al. 2010). In some instances, this may be due to a factor beyond the teacher's control (e.g., sickness, family concerns); it may be a lack of clarity in the curriculum, especially a misalignment between curriculum and assessment; and it may be a decision for students to continue working on a project that is not enhancing their learning. It is critically important for school leaders to understand the reasons for the success or failure of an intervention, as these reasons are the basis for adapting, changing or continuing the intervention – but such reasons must never become excuses for not achieving the agreed effects on student learning.

WHAT THIS MEANS FOR SYSTEM LEADERS

The role of systems is to support leaders' skills to develop such communities, to provide resources that assist feedback to teachers and school leaders about their impact on all students and to reward robust discussion about that impact. For an education system to be successful, it must

- recognise and develop expertise within the schools;
- determine ways for schools to diagnose, intervene and evaluate;
- esteem success; and

- use the powers of collective wisdom to ensure all teachers are achieving agreed magnitudes of effect on student learning.

To be successful, the system must be able to dependably identify and give recognition to expertise among teachers and school leaders. The system must also develop a professional community of teachers whose members acknowledge the differential expertise among their colleagues and work with all in the school to raise the overall level of expertise and effectiveness. All this is tempered with including 'outsiders' and external input to ensure that the evidence is credible, that high impact on all students is truly evident and that those in the school are adept at determining the all-critical consequences and next actions in light of their evaluations.

As noted earlier, these professional discussions must be conducted in an atmosphere of trust more than in an atmosphere of accountability. Without a level of trust, teachers, like most people, will close ranks, put up shutters and retreat to the old and tried methods behind a closed classroom door, claiming they have evidence they can improve learning. The school, not the individual teacher, should be the unit of analysis, and the two questions above ('What is the evidence that each student is gaining at least a year's progress for a year's input?' and 'What is the school doing in the light of this evidence?') should be the basis for outside accountability.

4. BRINGING IT ALL TOGETHER

One major feature that distinguishes most of the top countries educationally from those in the middle is that they focus their efforts within the school and within the classroom (especially by privileging teacher and school leader expertise) rather than spend their resources outside it. Further, they aim for all to gain at least a year's growth for a year's input and provide support for making these judgements.

Equity is critical, but it is not equity in terms of all students attaining similar average levels of achievement; rather, it is equity in that the possibility of attaining excellence is available to any student regardless of their background, prior achievement or the financial acumen of their parents. We all have the right to aim for excellence and to attain excellence in multiple ways.

The countries that put their emphasis on between-school policies engage in what I call the politics of distraction rather than the politics of esteeming excellence among teachers and school leaders. In distracted countries, there is an overemphasis on structures, buildings and tangibles that can be seen and multiple appeals to parents about their choices.

One of the assumptions that seems to underlie the politics of distraction is that there is a relatively simple intervention that can be defined and structured from near the top of

the political system and that can then work its way through to positive effects for students.

It is fascinating, as I travel around many countries, to hear the latest 'simple' solutions, to note how diverse and often contradictory they are and how earnestly they are believed in by the top in the hierarchy but rejected or ignored by those in classrooms. In contrast, one of the assumptions of the politics of collective action is that there is no single simple intervention but instead that there is a narrative of impact that can be shared, understood, implemented and evaluated within and across schools. It assumes that this involves a clear focus on the nature of learning and the teaching that supports it.

It is simple: to be able to make speedy and correct decisions on a moment-by-moment basis, to be able to know 'where to next' for twenty to forty students almost simultaneously, to know how to reliably diagnose and implement multiple teaching interventions and how to evaluate impact of teaching on learning requires high levels of expertise, as does ensuring that these decisions have common meaning across teachers and schools.

In the top education systems, however measured, it is the excellence of teachers, the support of such excellence and an open debate about the nature of growth towards

excellence that matters. In my narrative, many teachers and school leaders are the heroes. Learning has to be visible if we want it to occur and improve – among the students, among the teachers, among the school leaders and within the system. Of course, the conditions – the structural aspects of schools – need to be supportive for the efforts to improve the progression of learners (and the expertise of teachers and school leaders) to succeed. But they are not the main story. The key question is how to define a focus on learning and teaching in a way that makes them sufficiently central and capable of being improved systematically.

This is where collaboration comes in: collaboration based on success, on convincing evidence of this success, on privileging this evidence, on learning from it, scaling it up and ensuring that others also move to expertise. Collaboration is based on cooperativeness, learning from errors, seeking feedback about progress and enjoying venturing into the 'pit of not knowing' together with expert help that provides safety nets and, ultimately, ways out of the pit. Creative collaboration involves bringing together two or more seemingly unrelated ideas, and this highlights again the importance of having safe and trusting places to explore ideas, to make and to learn from errors and to use expertise to maximise successful learning.

This is as true for student learning as it is for teacher learning, school-leader learning and system learning. What we are therefore searching for is a basis from which they can discipline and challenge each other to achieve excellence collectively – based on evidence of their impact. This evidence of what maximises impact can then be shared meaningfully

between schools. Herein lies a major function of systems: to provide the resources, the forums and the emphasis on success in our schools. Teachers, especially many successful teachers, are so busy in their orbits of classrooms that they need leaders and systems to be critical partners in building coalitions.

There are many tensions and issues to be explored in this spreading of success, and there is a major need to reduce the negative effects of the creation and maintenance of the organisational routines of schools that disrupt learning. An unanswered question is, 'How do we create positive, cyclical relationships between improvements in teaching and learning and the organisation of infrastructure and resources?' Curriculum change in Hong Kong was almost the pretext for a reconfiguration of teaching and learning processes. Assessment change in New Zealand was a pretext for a reconfiguration of teaching and learning in secondary schools. In other systems, it could be other policy interventions. The process of aligning tasks, support and assessment is essential, but too often in 'reforms' the process of restructuring other parts of the system dominates, ignores or interrupts teaching and learning in negative ways.

Have we the courage to dependably recognise the excellence that is often all around us in our schools, among our teachers and with our school leaders? Have we the courage to then build a coalition of success based on this excellence and invite the others in the system to join this coalition? The aim is not aspiring to utopia but scaling up the success already about us. It is expertise, it is reliable judgement, it is passion for making the difference, and it

is collaborative sharing of this knowing and doing and caring. This requires the greatest investment, and the benefits for the students will be manifest, powerful and exciting.

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