RSA

Action and Research Centre

The Ideal School Exhibition

by Julian Astle

November 2017

Contents

Foreword

Focus

This paper is about a group of schools that are bucking a growing and concerning trend: that of schools narrowing their focus, and hollowing-out their teaching, in their desperation to meet the constantly shifting demands of the government's accountability system.

This trend is understandable. The risks associated with leadership have become so high, with governors and trustees fearing for their schools and headteachers fearing for their jobs, that the task of clearing the latest threshold or hitting the next target has come to dominate almost everything many schools do; proof, if it were needed, that in high-stakes, low-trust systems, only those things that get measured tend to get done (with too few questions asked about how they get done).

But there are some school leaders who simply refuse to play this bureaucratic education-by-numbers game; leaders whose decisions are shaped, not by the government's agenda, but by their own sense of mission – by the higher purpose to which they have dedicated themselves and their schools.

So I decided to go and meet some of these educational 'missionaries' to get a better understanding of what they are trying to achieve and how they are trying to achieve it. Although their schools are highly untypical, my hope was that they might nonetheless provide some lessons, and inspiration, for others – for the vast majority of headteachers who are neither 'gamers' nor 'missionaries', but hardworking pragmatists who try to do the best they can by their students in the circumstances.

In trying to describe and analyse what it is these schools do, I have had one big disadvantage and one advantage.

The disadvantage is that, by background, I am a policy analyst, not an educator or an educationalist. It is therefore entirely possible, likely even, that in discussing the merits of different school models and of how they go about their core business – the unfathomably complex task of effecting invisible changes in the hearts and minds of their students – I have occasionally tripped over my own ignorance. That is why this paper is offered up as a discussion document; it is intended to intensify, rather than settle, the debate about how we can get schools focused on education's primary purposes, like personal fulfilment and societal progress, rather than the proxy goals of tests and targets.

The advantage of being a relative newcomer to the 'what' and 'how' of teaching and learning is that, when I visited each of the schools, I arrived with few preconceptions and little ideological or professional baggage; I am not invested in any particular approach to schooling, having never argued for one model over another. So although each of our world-views is coloured to some extent by our own values and experiences, I have

sought, as far as possible, to approach the task with an open mind, judging everything I saw, heard and read on its merits. Doing so has been made easier by one other important fact: that my views about what makes for an excellent school are far more tentatively held than is my belief in the importance of diversity and choice across the system.

Why? Because what parents look for when choosing a school varies depending on their values, beliefs and aspirations. And, more importantly, it varies, or should vary, according to the talents, interests and needs of their children who, after all, will have to bear the consequences of whatever choice is made.

As a liberal, I don't believe policymakers should seek to restrict or even guide those choices – quite the opposite. Parents know better than ministers who their children are and what sort of adults they wish them to become.

That is why this paper is called the ideal school exhibition, not the ideal school competition – because there is no single model that is ideal for every child and family.

Structure

The paper is divided into three parts, which the following four quadrant matrix should help explain:

	Gamers	Missionaries
Highly successful		
Less successful		

Part 1

Chapter one ('The world beyond the school gates') describes how, at a moment in human history when we desperately need to expand the conversation about the purposes and essential character of a school-based education, we have done the opposite: focusing on education's narrow instrumentalist value and obsessing over tests, targets and league tables and the tactics for passing, hitting and climbing them.

Chapter two focuses on the dividing line that separates the 'gamers' from the 'missionaries' – ie school leaders whose priorities and practices are shaped by the demands of the accountability system and those whose priorities and practices are shaped by their own sense of mission. It asks how widespread is the problem of schools gaming the accountability system, how that problem manifests itself, and what effect it is having on the character and quality of the education England's school children are receiving. And it argues that having a large number of schools on the left side of this dividing line is a serious problem even if they are located in the upper left, rather than lower left, quadrant.

Part 2

This part focuses on the upper right quadrant where the mission-oriented schools I describe in this report are to be found.

Chapter three ('Defining and embedding the mission: values, aims, design principles') looks at how these schools stay focused on their own aims and objectives despite the external pressures of the accountability system, and how they go about translating their high level aims into a practical project on the ground. How, in other words, they manage not to be pulled into the education-by-numbers game being played out on the left hand side of the table.

Chapter four ('Pursuing the mission: challenges for practitioners') sets out why these mission-oriented schools teach the way they do, and assesses the risks they face which, if not mitigated, could see them fall from the upper right quadrant to the lower right quadrant where the less successful mission-oriented schools are to be found. It explains how those risks vary according to the nature of the mission, with those mission-oriented schools that use student-led, project-based approaches facing a quite different set of challenges from those that use more traditional teacher-led, didactic methods of instruction. The fact that in most schools teachers tend to 'do a bit of both' doesn't change the fact that these two approaches are rooted in two very different sets of values and beliefs (about such fundamentals as the relationship between adult and child, knowledge and skills, tradition and progress), an understanding of which helps explain the motivations and intentions of the mission-driven headteachers I met.

Part 3

Chapter five ('Calling time on the game') returns to the key challenge raised in Part one – that of reforming the system at every level, from the secretary of state to the classroom teacher, to ensure that schools are focused on education's primary purposes rather than the proxy goals of tests and targets. The sign of success being a reduction in the number of schools on the left hand side of the table and an increase in the number on the right hand side. Fewer gamers, more missionaries in other words.

Only by meeting this challenge will we be able to move our national conversation on to the more important (and interesting) question of how best to prepare our children for the challenges that await them in the adult world. Chapter six ('Education in an age of unreason') addresses the nature and scale of this task.

Language

In dividing school leaders into two groups, gamers and missionaries, I am acutely aware that I am describing two tiny minorities – those whose decisions are heavily influenced by the demands of the accountability system, and those who pay little or no heed to those demands, no matter the professional consequences. I do so to make an important point: that although most school leaders are in neither camp, all of them are subject to the magnetic pull of these two poles – the need to meet the performance targets on which their own careers, and those of their colleagues, depend, and the instinct always to put the educational and developmental interests of their students first. In an ideal world, these two objectives would be perfectly aligned. As we shall see, in reality they often are not.

Audience

This essay addresses two audiences:

First, politicians and policymakers, to persuade them that the costs of our high-stakes school accountability system now outweigh the benefits, and that, 25 years after the creation of Ofsted and the publication of the first league tables, our school system has reached a stage where it would benefit from a more supportive, less punitive approach to school improvement.

And second, all those frustrated idealists working in our schools who understand the way the system works but feel powerless to change it. I hope they feel inspired, even in advance of the policy changes I'm proposing, to make change happen in their own schools – to come together with colleagues to sharpen the definition of their shared mission and to put that mission at the centre of everything they do.

Purpose

The RSA's mission is to help bring about a 21st Century Enlightenment. We believe the provision, to every child and young person, of a rich and broad education that instils a life-long love of learning, is a precondition for the realisation of that aim.

But before we can move towards that more enlightened future, we first need to get our school system focused on education's primary, rather than proxy, goals. Only then can we move our school system to the next stage in its evolution.

We believe a consensus is there to be assembled behind this aim – one that recognises the need for transparency and accountability to ensure money is well spent and children are well taught, but which also recognises the price we are paying for the distortions of professional priorities and practices that our accountability system has produced.

Whether, having moved the public and professional conversation on to the substance of education, we can, or even should, reach a consensus view about what an ideal school might look like, is less clear. After all, education is goal driven. And the specification of those goals is determined by our values. For as long as we value different things, we will inevitably have different views about what makes for an ideal school. But even here we should be able to agree on some important things: on the benefits of being able to choose from, and compare, different models; of understanding the relative effectiveness of different approaches against a range of outcomes; of thinking through the trade-offs involved in pursuing one educational mission rather than another; and, crucially, of ensuring that, whatever their mission, educators work with, rather than against, the growing body of scientific evidence about how we learn and what that means for the way we teach.

There are thousands of idealistic school leaders and teachers who are desperate to break free of the logic and language of our school accountability system, and to engage in these conversations instead. They should know that these are precisely the conversations the RSA intends both to host and contribute to in the coming years. We hope that everyone with an interest or a stake in our schools will accept this invitation to join us.

Executive Summary

It is less than thirty years since the academic, Francis Fukayama, wrote his now famous essay 'The End of History' in which he announced that western liberal democracy had triumphed over its adversaries, and that a new post-ideological era of peace and progress had begun.

It is fair to say his thesis hasn't aged well. This year's school leavers will head out into an increasingly turbulent and dangerous world – a world of economic insecurity and domestic and geo-political upheaval. And they will have to find their place and their way in societies that are being transformed by the liberating but profoundly destabilising forces of globalisation. Societies that, in the wake of the deepest economic slump since the Great Depression, are now turning in on themselves over issues of culture, identity, belonging and belief.

The root causes of the West's culture wars are many and complex. But chief among them is the fact we live on a dangerously overheating and ever more densely populated planet where conflict and persecution, flooding and drought and vast inequalities of opportunity and wealth have displaced 65 million people and created a migrant population greater than that of Brazil. Amid the backlash to this unprecedented movement of people from poorer to richer nations, liberalism is in full retreat, while nationalism, nativism and protectionism are all on the rise. And with an angry populist politics on the Right feeding off, and feeding, an intolerant and censorious strain of identity politics on the Left, our ability to transcend our hardwired instinct to tribalism – to put our shared humanity before our group loyalties – is once again being severely tested.

How best to prepare our young people for that world is the conversation we should, as a society, be having when we talk about education. Yet so focused have our schools become on achieving the proxy goals of passing tests, hitting targets and climbing league tables, that they risk losing sight of education's higher purposes, like individual fulfilment and societal progress.

This is regrettable but understandable. With governors and trustees fearing for their schools, and headteachers fearing for their jobs, our punitive accountability system has come to dominate almost everything some schools do, distorting professional priorities and practice and narrowing and hollowing out the education our children receive.

We know that in high-stakes, low-trust systems, what gets measured tends to get done. But what about those things that don't get measured, and therefore don't get done? And what about the way in which things get done – the tactics some schools employ and the games they feel compelled to play to ensure performance targets are met and thresholds cleared? Well, outright cheating and the most egregious forms of gaming remain mercifully rare, though rising. But low level gaming is rife and teaching to the test endemic.

But there are some school leaders who simply refuse to play this bureaucratic education-by-numbers game; leaders whose decisions are shaped, not by the government's agenda, but by their own sense of mission – by the higher purpose to which they have dedicated themselves and their schools.

This report is about them – about a group of 'missionary' headteachers and the mission-oriented schools they lead. Despite their many and important differences, they have one thing in common: they are all driven by a sense of purpose that goes well beyond meeting the demands of the government's accountability system. What that purpose is varies from school to school.

Michaela Community School in Brent, where visitors are greeted by a large sign declaring "Knowledge is Power", is all about the life-changing potential of a knowledge-rich education; about giving children from deprived backgrounds the cultural literacy to compete with their more privileged peers.

XP School in Doncaster, inspired by High Tech High and the Expeditionary School movement in the US, is all about developing the skills and capabilities that are deemed most important to success in the workplace and the world, and about doing so through enquiry-based, real-world 'expeditions' or projects.

Shireland Collegiate Academy in Smethwick in the West Midlands is blazing a trail for those who believe not only that the traditional school model needs to be completely reinvented for the new century, but that technology now allows us to do that in ways that make learning more personalised, assessment more useful, the curriculum more dynamic and parent and community engagement more meaningful.

Reach Academy in Feltham is all about building a culture of high expectations and even higher aspirations in the belief that any child, no matter how disadvantaged, can achieve remarkable things with the right support in place. That support, however, goes well beyond teaching. Inspired by the Harlem Children's Zone, Reach's founders are committed not just to running a great school, but to building a strong and resilient community, with plans in place for an on-site hub, out of which a range of social programmes will be delivered.

School 21 in Stratford is designed not only to prepare children for the future but to teach them that "today matters"; that they don't need to wait for adulthood to produce beautiful work of real value to authentic audiences. The same spirit – that education shouldn't all be about sacrifice and suffering now in the hope of some future return – also underpins the school's emphasis on child wellbeing and the development of pupils' speaking skills, the means by which they help them find their voice, literally and metaphorically.

West Rise Junior School in Eastbourne is focused on character development; on providing pupils with unforgettable outdoor experiences (from firing a shotgun to herding water buffalo) designed to teach them discipline, responsibility and self-control, the pre-conditions for a life of freedom and discovery.

The Plymouth School of Creative Arts is committed to developing its students' creative capacities and providing them with an aesthetic

education that showcases the beauty, utility and satisfaction to be found in great art, clever design and true craftsmanship. It is a place for making and creating.

Broadlands and **Ashgrove** are two apparently ordinary primary schools in deprived neighbourhoods on opposite sides of the country that are showing the extraordinary things teachers can achieve when they devote themselves completely to the children in their care, and are prepared to do whatever it takes to dismantle the many barriers to learning those children face.

Bealings Primary School in rural Suffolk is committed to building a child-centred, child-sized, experiential learning environment and to a pedagogical model known as Mantle of the Expert in which children are taught, or more accurately, helped to learn, through role-play, drama and discovery.

Bedales, a fee paying school in Hampshire, defines itself by its humanity (the school was established to provide a humane alternative to the regimented austerity of Victorian schooling) and through its holistic educational philosophy, summed up by its motto "to educate the Head, Hand and Heart". It strives to introduce its students to what is true (academics), what is beautiful (creativity and making) and what is right (morals and ethics).

The West London Free School is committed to delivering – for free and to all – the type of classical liberal education normally reserved for those who attend grammar or private schools. Its stated purpose is:

> "not primarily to prepare pupils for a job or career [but to] transform their minds so that they are able to make reasonable and informed judgments and engage fruitfully in conversation and debate – not just about contemporary issues but also about the universal questions that have been troubling mankind throughout history."

All these schools share a key defining characteristic: an unshakeable sense of their own identity and values, and a clear vision, rooted in those values. To turn that high-level vision into a practical reality on the ground, each of them has thought deeply about what it is they do – about the design principles that underpin their model, and about how, through the use of carefully selected rituals and routines, those principles can imbue the day-to-day life of the school.

But clarity about one's values and aims, and attentiveness to the question of how they might be made manifest in everyday school life, are not the only pre-conditions for success. Mission-oriented schools must also think hard about their practice – about what they teach (curriculum), how they teach it (pedagogy) and how they know if they're succeeding (assessment) – and about how to mitigate the risks associated with their chosen approach.

A key dividing line running through this group of mission-oriented schools separates those that seek to develop skills, competencies and capabilities through student-led, project-based learning, from those that seek to teach knowledge, explicitly and didactically, with the teacher very much in the lead.

As the schools in this report are demonstrating, both approaches can be made to work and to work brilliantly. But understanding how they can go wrong is vital to ensuring they don't.

The leaders of School 21, XP School and Shireland Collegiate Academy argue passionately and persuasively that student-led project-based learning provides for richer and more meaningful learning experiences that support deeper understanding; that by transferring a significant amount of control over the project to students, it provides them with the sense of ownership and responsibility that are the hallmarks of self-motivated, independent learners. They point out that by requiring students to work in groups, as well as individually, projects teach them the social and emotional skills needed to collaborate and to lead; that by culminating in some kind of product or production, they teach them the value of drafting and redrafting, of learning from their mistakes, of persevering in the face of difficulty and of taking real pride in the quality of their work; and that by creating a systematic process for documenting and reflecting on learning, they help students 'learn how to learn', with teacher feedback and self- and peer-assessment a central feature.

But those hoping to achieve the success these schools are achieving need to beware the risks associated with this model. In particular, they need to heed three key warnings from cognitive science:

First, they need to ensure they don't fall for the 'active learning fallacy' – mistaking physical activity for cognitive activity, and allowing the former to displace the latter. They need to be alert to the danger that an activity-packed project might not lead to the expected learning if lots of those activities are disconnected from, or only tangentially linked to, the content at the heart of the project. In other words, they need to keep their primary focus on the learning, not the project.

Second, they need to beware the risk of 'cognitive overload', recognising that novices are highly reliant on their limited working memories and therefore likely to become overwhelmed when taught complex things in complex ways with minimal guidance. And they need to be mindful of the fact that the most deprived students are particularly vulnerable to this risk, as many of them do not possess the cultural capital – a store of prior knowledge – without which all learning, but discovery-based learning in particular, becomes more challenging. Since activity-filled projects provide the confused student with easy hiding places, the risk is they end up, to quote American educationalist Gilbert Sewall, "lost in action", their disorientation obscured by a "whirlwind of doing and doing."

Finally, any school that puts the acquisition of skills at the centre of its mission, and that seeks to teach or assess those skills directly, needs to satisfy itself that they are indeed as generic and transferrable as that approach assumes; that they can be cultivated and applied with equal effect across different knowledge domains. A simple thought experiment – asking yourself whether you can communicate with equal authority, or think equally critically, about a subject of which you know little, as you can on a subject you know well – reveals how domain-specific these skills are, and how limited are their transferrable elements. Few argue that skills are not critically important. The issue at stake is how to develop them; within traditional subjects and disciplines, within cross-curricular or interdisciplinary projects, or as 'subjects' in their own right.

Schools like Michaela Community School, Reach Academy and the West London Free School would no doubt recognise Sewall's description of a brilliant knowledge-rich education:

> "At the core, always, is serious content approached seriously. Knowledge builds on knowledge. Thirteen years of carefully sequenced content and jealously guarded classroom time allow students to build an enormous storehouse of knowledge and skills and the ability to use them. And since knowledge and success are the best breeding ground for interest to take root and expand, the more students know, the more they will want to know. Under the leadership of their teacher, students work to unearth meaning; to evaluate, interpret, compare, extend, and apply; to analyse their errors, present their findings, defend their solutions; to attend carefully to what others say; to get their thoughts down clearly on paper; to understand. This is not boring and it is not passive. This is real action learning. This is the mind at work."

But anyone looking to emulate the success of these schools needs to understand the risks associated with their model, a model first developed by some of the highest performing American Charter schools like KIPP (Knowledge is Power Programme), which combine fast-paced didactic instruction with strict discipline.

The first risk is that the teacher fails to get beyond the 'grammar' of a subject; the knowledge, facts, structures and rules that are the essential foundation – but no more than a foundation – of a great education. The danger is that, in their rush to introduce their students to "the best that has been thought and said", they resort to one-way 'monologic' teaching rather than the genuine exchange of 'dialogic' teaching. And, in so doing, leave too little time for 'dialectics' – for questioning, analysing, challenging and debating – with the result that they teach children what to think, but not how to think.

The second related risk is that, in their determination to teach as much knowledge as can be packed into the timetable, they lose sight of the importance of 'rhetoric' – the arts of communication, self-expression and creativity that allow us to explore the subjective as well as the objective; what we feel as well as what we know. Speaking, singing, making, drawing, dancing, acting, designing, reciting, playing, presenting; all are part of a rich and rounded education – an education of the heart and hand as well as the head – but can easily be pushed to the margins of a knowledge-based education that privileges the core academic subjects.

Finally, they need to ensure their combination of high-intensity didactic instruction and an elaborate programme of attitude and behaviour modification isn't so supportive and restrictive that it prevents students not only from falling down but learning how to get back up. The high college drop-out rate among KIPP's first students showed how difficult the transition from school to university can be if students haven't first acquired the self-discipline, perseverance and resilience needed to study, work and live independently. Critics of these 'high expectations, no excuses' schools claim they are likely to produce young adults who are too reliant and compliant – simultaneously dependant on, and acquiescent towards, authority.

All the schools described in this report are able to explain, cogently and persuasively, either why they believe these concerns are misplaced, or what they are doing to address them. In doing the latter, they tend to reinforce a key lesson from scientific and educational research which adds some important nuance to what can be a rather binary discussion: that the way in which students are best helped to learn (and indeed, behave) should change as they get older and as they progress from novices to experts. At the start of that journey, when students have little relevant knowledge committed to long-term memory, clear, explicit, didactic instruction and some structure and constraint have an important role to play. But getting a student ready for post-compulsory study or work requires a school progressively to transfer responsibility and control over the learning process, and over behaviour, to the student. The ultimate goal being independent learners, capable of independent thought.

It would be a mistake to think that strict sequencing – knowledge then skills, didactic instruction then independent learning – is the way to resolve this dilemna or to organise a school, however. As teacher turned author Martin Robinson explains, the historic Trivium – the collective title for the three arts of 'grammar' (knowledge and rules), 'dialectics' (analysis and questioning) and 'rhetoric' (presentation and performance) – provides a useful framework for ensuring that all three are present and appropriately balanced throughout a child's educational journey. Only by achieving an evolving equilibrium between these three arts, Robinson argues, will we resolve the conflict between knowledge and skills, freedom and constraint, and tradition and progress that sits at the centre of the education debate. And only then will we be able to provide what the poet and polemicist John Milton described as "a complete and generous education."

But the Trivium stems from an age when education was for the elite. And its ideas have traditionally provided a foundation for the type of liberal arts education that is often still only available to an elite.

The task the state-funded, non-selective, mission-oriented schools in this report have taken on is to provide a complete and generous education to every child – a quite different challenge.

Here, they also provide some valuable lessons: about how to create a culture that promotes good behaviour and supports learning; about how to get every child to succeed no matter their starting point; about how to overcome the barriers to learning thrown up by deprivation and by the growing problem of child and adolescent mental ill health; about how to prepare young people for the opportunities and challenges of adulthood by making your school porous to the outside world; and about how to turn your school into a 'deliberately developmental organisation' where professional development is constant, rather than continuing, and where teachers help each other to be the best they can be.

Although research and evidence are, rightly, playing an ever bigger role in education, ultimately, the debate about the ideal school isn't technical or scientific. It is a values-based debate about what kind of adults we are trying to produce, and what kind of society we are trying to build.

For anyone who values living in an open and democratic society, it is a debate, first and foremost, about how to educate for freedom; about the

sort of schooling that will enable a young adult to fully grasp freedom's value, understand its vulnerabilities, recognise its enemies and commit to its defence.

It is a debate about how to give our young people the shared language of reason – the means by which, in our multi-cultural, multi-faith societies, we can transcend the divisive politics of identity and make common cause with other rational people from beyond our own group.

It is a debate about how to give our young people not only the knowledge, but the wisdom and courage to make judgements, intellectual, moral, and aesthetic, and the wherewithal to join what the philosopher Michael Oakeshott referred to as "the great conversation of mankind."

In short, it is a debate about what kind of education will prepare them, not just to write a good exam, but to live a good life.

That is the debate these mission-oriented school leaders are engaged in. And that is the debate the RSA intends to host, and contribute to, in the years ahead as we work to create the '21st Century Enlightenment' that is the RSA's stated mission.

But to do this, we must first ensure that all those who work in our schools are able to focus on education's primary goals, rather than the proxy goals of tests, targets and league tables. This cannot be achieved by turning back the clock and dismantling the entire accountability system, however. Children only get one go at schooling, and the idea of leaving any of them in schools we know are seriously and chronically underperforming is unconscionable.

Instead, we need considered reform cautiously applied. Reform involving changes to policy, practice and culture at every level, involving ministers, officials, inspectors, examiners, trustees and governors, school leaders and teachers.

The aim of those changes is to free headteachers from having to choose between their own interests and those of their pupils; to get classroom teachers teaching to the curriculum, not the test; to get examiners to reward genuine quality rather than coached responses; to get Ofsted to look at how, as well as whether, a school has met its performance targets; to get government and the inspectorate out of the business of defining excellence and focused solely on identifying failure; and, in everything they do, to ensure the actions of policymakers and regulators are more supportive and less punitive.

And behind all these aims is one over-riding objective: to help those who lead and teach in our schools reclaim ownership of their institutions, their profession and their practice.

As the vice-like grip of the accountability system is loosened – as schools are given more space and more freedom – so the profession must take greater responsibility for driving standards, with research and evidence playing an ever more prominent role.
To achieve these aims we need to:

1. Create a new culture in educational assessment by:

   ▪ Making tests harder to teach to. This involves attending to the arcane details of test design to increase unpredictability without

reducing reliability and validity; using more closed-question and multiple choice tests where appropriate; and supporting the effort to refine and promote the use of comparative judgement, which better captures genuine quality, for the marking of essay based exams;

- Teaching teachers about the dangers of teaching to the test such that they develop a proper understanding of the difference between the sample and the domain and a true appreciation of the centrality of the curriculum to a great education. This could usefully begin by making Ofsted's assessment training (developed for its own inspectors) available to all senior leaders;
- Helping teachers embrace genuine formative assessment by embedding regular, highly specific, low-stakes testing in their practice for purely diagnostic purposes, with the emphasis on providing useful feedback and identifying helpful next steps.

2. Reform the accountability system by:

- Making explicit Ofsted's emerging role as the guardian of a broad and balanced curriculum; a counterbalance to the pressures of the Department of Education's (DfE) numbers-based accountability system; the body mandated and expected to 'referee the game', looking not only at what schools achieve, but how they achieve it;
- Making the DfE's representation of school performance more nuanced and balanced by providing more data about the school, its students and its alumni (so-called 'destinations data');
- Reweighting league tables to stop the practice of 'off-rolling' low performing pupils. In future, league tables should include the GCSE results of pupils who, for whatever reason, leave between the start of the secondary school and the time they sit their GCSEs 15 terms later. The DfE should allocate these pupils' results to the institutions where they have spent time on-roll in proportion to the amount of time they spent there.
- Withdrawing the 'right' for schools to act as their own admissions authority, and establishing a Commission on School Admissions, convened by the RSA, to look at how best to permanently close the 'low road to school improvement' (manipulating the admissions system rather than improving teaching);
- Ensuring all schools receive the effective and timely external challenge and support they need by creating a comprehensive but contestable 'middle tier' of MATs, local authorities and others, all of whom will be held accountable for their performance. Middle tier bodies will effectively operate on licence, with those that cannot demonstrate an ability to raise standards replaced by new ones. Thus, the weight of accountability will be shared between schools and those charged with supporting them, with an inbuilt incentive to ensure that support is of the highest quality.

The Ideal School Exhibition

3. Encourage a teacher-led professional renaissance by:

- Returning the definition of educational excellence to the profession by abolishing the Ofsted 'Outstanding' category and getting the inspectorate focused solely on identifying those schools that are either struggling to meet their students' needs or putting those needs second to their own institutional interests by gaming the system. Schools that are doing neither should be allowed to set their own priorities in line with their own values and vision;
- Supporting and celebrating all grass-roots initiatives designed to improve the quality of teaching and to support the wider contribution schools make to their local communities and society. Initiatives like the National Baccalaureate are of particular importance in the effort to incentivise the provision of a richer, more rounded education.

England's school accountability system has performed a vital function over the last 25 years, exposing underperformance and driving improvement, particularly in the basics of numeracy and literacy. And in some important ways – not least the increased emphasis on progress rather than attainment – the system has become less crude over time.

But the bigger trend has been a ratchet-like strengthening of the system's grip on our schools, which have now completely internalised its logic and language. Gaming has become more common and teaching to the test so standard it is confused for good practice. Innovation and collaboration meanwhile are powerfully disincentivised. By any objective measure, the costs of the system now outweigh the benefits.

The headteachers in this report have shown, through their heroic efforts, what can be achieved, even within this environment. Our task is to build a system where far more schools are able to do what these mission-oriented schools are doing, but crucially, where success doesn't depend on heroism.

At the RSA, we believe we have now reached that critical point where change becomes possible: where the risks of inaction are greater than the risks of reform. And we believe there is a broad coalition for change waiting to be assembled. That coalition, like the group of schools in this report, spans the ideological spectrum from progressive to traditionalist and all points in between. It is a coalition of missionaries, visionaries and idealists, whether fulfilled or frustrated, whether fighting the good fight or itching to join it.

They should know they have an ally, and a meeting place, in the RSA.

Part One

Chapter 1: The world beyond the school gates

We live in a world where only bad news is considered newsworthy. As a result, it is easy to lose sight of just how much better the fundamentals of life will be for most young people today than it was for their forebears.

Two hundred years ago, before the routine vaccination of babies, 43 percent of all the world's children died before the age of five, compared to only four percent today. Where then a child would be lucky to live to 35, today they can expect to live at least twice that long. Where just 14 percent of young people would have received at least a basic level of education, 85 percent now do so, sending the global illiteracy rate plummeting, from 88 to 15 percent. Meanwhile, the number of people living in extreme poverty is down from 94 to 10 percent, with much of that still-accelerating progress taking place over the last 25 years, during which time a staggering 137,000 people were lifted out of poverty every day.[1]

Whether the medical and technological advances that have delivered these gains in life expectancy, literacy and prosperity are making us happier and safer is moot, however. With the three 'Ds' of dementia, diabetes and depression claiming ever more victims, the consequences of our increasingly long lives, and our sugary, sedentary yet stressful lifestyles, are becoming impossible to ignore.[2]

And with the terrorist threat level never falling below 'severe', tensions between Russia and the West threatening a new cold war, and nuclear-armed North Korea developing the capability to strike mainland America, public safety and national security are once again key public concerns.

Even if our worst security fears prove overblown, the fact remains we live on a dangerously overheating and ever more densely populated planet where conflict and persecution, flooding and drought and vast inequalities of opportunity and wealth have displaced 65 million people and created a migrant population greater than that of Brazil. Amid the backlash to this unprecedented movement of people from poorer to richer nations, liberalism is in full retreat, while nationalism, nativism and protectionism are all on the rise. As a species, our ability to overcome our fear of the 'other' – to transcend our hardwired instinct to tribalism – is once again being severely tested.

1. Roser M (2017) 'The short history of global living conditions and why it matters that we know it'. Published online at OurWorldInData.org
2. Rosenblat, J.D., Mansur, R.B., Cha, D.S., Baskaran, A., and McIntyre, R.S. (2015) *Depression, Diabetes and Dementia*. In Comorbidity of Mental and Physical Disorders, Sartorius, N., Holt, R.I.G. and Maj, M. (eds), Key Issues in Mental Health, Vol. 179, Karger

Yet it is less than 30 years since history was supposed to have ended or, more precisely, since the Berlin Wall fell and political scientist Francis Fukuyama wrote his famous essay *The End of History?* In it he announced that the 20th century's ideological battles between east and west were over, that western liberal democracy had won, and that a new post-ideological era of progress and peace had begun.[3]

That was 1989, the year I left school.

This year's school leavers will head out into a more turbulent and dangerous world – a world of economic insecurity and domestic and geo-political upheaval. They will have to find their place and their way in societies that are being transformed by the liberating but profoundly destabilising forces of globalisation, and which, in the wake of the deepest economic slump since the Great Depression, are now turning in on themselves over issues of culture, identity, belonging and belief.

As citizens, the class of 2017 will have to weigh the costs of joining or turning away from an increasingly shrill and polarised public debate, dominated by the deliberately offensive and the easily offended, the former emboldened by the anonymity of the online echo chamber, the latter protected by 'trigger warnings' and 'safe spaces', the struggle between them throwing up new challenges to the most precious but fragile democratic freedom of all – free speech.

In a post-truth age when 'alternative facts', 'fake news' and invented conspiracies are used to pollute the information space and undermine the very notion of knowable truth, those who enter that debate will need to stay a safe distance from both cynicism and credulity by learning to interrogate competing truth-claims. They will need to make reasonable judgments not just about plausibility, but about motivation, correlation and causation, knowing what to attribute to malign intent and what to incompetence or chance.

At a time of angry populism, when leaders invoke their democratic mandates to question the integrity of democratic institutions and to challenge the legitimacy of their decisions, they will need to know the difference between an 'enemy of the people' and a judge or legislator discharging their constitutional duty.

In an era of identity politics, when people are all-too-often judged not, as a wise man once urged, by 'the content of their character' but by the colour of their skin, their sex or by any number of other innate or inherited characteristics, the class of 2017 will need to decide for themselves what good, if any, is likely to come from placing the group, rather than the individual, at the centre of our public discourse.[4]

At a time when elites and experts are widely derided – when the cultural critic and the public intellectual have been shunted off stage by a never-ending line of reality TV stars and talent show hopefuls – the class of 2017 will need to identify their own thought leaders and their own champions of quality and truth to help sift the sublime from the ordinary, the profound from the trivial and the authentic from the derivative.

3. Fukuyama, F. (1989) *The End of History?*. The National Interest, No. 16, pp. 3-18
4. King Jr, M. L. (1963) Speech, Lincoln Memorial, Washington DC 28 Aug. 1963

At a time when our multi-cultural, multi-faith societies are struggling to settle on the core, non-negotiable values that bind them, the class of 2017 will need to learn to 'live and let live' without ever lapsing into moral relativism; to understand both the value, and the limits, of tolerance. They will need to weigh competing rights, balance mutually exclusive freedoms, and reconcile apparently incompatible world-views and, when compromise cannot be reached, to settle their disputes peaceably within a framework of democratically determined, impartially applied laws.

And when Islamists and far right extremists are willing a violent 'clash of civilisations', the class of 2017 will need to know how to resist their provocations without shrinking from the battle of ideas that will have to be fought between enlightenment and bigotry.[5] They will need to keep sight of the fact that the front lines of this unavoidable battle run through, not between, nations and religions.

Most importantly of all, they will need to learn that all of this will be more easily achieved if they – we – can rediscover our civility, generosity, empathy and humour, the diminution of which has always accompanied the rise of man's worst ideas and most dangerous ideologies.

This poses a challenge for all of society, but particularly for our schools – the communities within which children are not only taught but socialised; the institutions charged with passing on society's norms, customs, culture and values.

As the American psychologist and educational reformer John Dewey put it: "Democracy has to be born anew every generation, and education is its midwife."[6]

Anyone who doubts the connection between liberalism, democracy and education need look no further than contemporary Hungary, a country that has elected as its prime minister a man who promised to build an 'illiberal democracy' knowing full well that, as The Times' Philip Collins puts it: "Liberal democracy comes as a pairing and anyone who disparages the first, threatens the second."[7] But what Viktor Orbán also knows, and his actions over the seven years since his election reveal, is that an enlightened liberal democracy depends for its survival on education. Which is why, in contrast to the global trend, he has sought to restrict, rather than expand, the educational opportunities available to Hungary's youth. Since 2010 he has cut education budgets at every level, lowered the school leaving age from 18 to 16, reduced the number of young people going to university, appointed powerful chancellors to exert political control over the country's higher education institutions, introduced a new, highly nationalist curriculum in schools and, most recently, passed into a law an apparently technical regulatory requirement, the actual purpose of which is to close the Central European University, hitherto a beacon of openness, independence and academic freedom.[8]

5. Huntington, S., (1997) *The Clash of Civilisations?* The Debate. Simon & Schuster
6. Dewey, J., (1916) *The Need of an Industrial Education in an Industrial Democracy,* Manual training and Vocational Education, Vol.17
7. Collins, P. (2017) EU must wake up and defend democracy. *The Times Online* [online] 13 April. Available at: www.thetimes.co.uk/article/eu-must-wake-up-and-defend-democracy-djtp97g80
8. Müller, J-W. (2017) Hungary: The War on Education, *The New York Review of Books* [online]. Available at: www.nybooks.com/daily/2017/05/20/hungary-the-war-on-education-ceu/

The lesson could not be clearer. When authoritarianism is the goal, education is the problem. When freedom is the goal, education is the solution.

But how do we educate for freedom? What sort of schooling enables a young adult to fully grasp freedom's value, understand its vulnerabilities, recognise its enemies and commit to its defence?

What kind of schooling will give our children the shared language of reason; the means by which, in our multi-cultural, multi-faith societies, we can transcend the politics of identity and make common cause with other rational people from beyond our own groups?

What kind of schooling will give our young people the wisdom and courage to make judgements, moral, intellectual and aesthetic, and the wherewithal to join what the philosopher Michael Oakeshott referred to as "the great conversation of mankind"?[9]

In short, what kind of education will prepare them, not just to write a good exam, but to live a good life?

There are many plausible answers to this, but 'the status quo plus an hour of civics' is surely not one of them.

For this is a question which, once asked, leads inexorably to a fuller, richer, more expansive account of education's purposes and character than that which underpins our current, technocratic, narrowly instrumentalist debate.

It is a question that challenges us to think afresh about how, as a society, we can provide our children with what John Milton once called "a complete and generous education."[10]

9. Oakeshott, M. (1959) *The voice of poetry in the conversation of mankind: an essay* Bowes & Bowes

10. Milton, J. (1909-14) O*f Education Tractate on Education* The Harvard Classics. Available at: www.bartleby.com/3/4/1.html

Chapter 2: Gamers and Missionaries

Anyone who has dipped into the education debate in England could be forgiven for thinking the most important fault line running across that system is that which separates progressives from traditionalists. On one side, the future-facing 'Progs' with their emphasis on 21st century skills and on what Tom Bennett, founder of researchED, calls "groovy teaching" – hands-on, experiential, student-led and project-based. On the other, the canon-revering, fad-shunning, chalk-and-talk 'Trads' with their relentless focus on what Peter Hyman, the founder of School 21, dubs "behaviour and basics."

But the trench that separates progressives from traditionalists is not the most important dividing line in contemporary English schooling. For that, we need to focus on the line, drawn in green below, which separates the 'missionaries' and the 'gamers'.

	Gamers	Missionaries
Highly successful		
Less successful		

Missionaries, as the name suggests, are those school leaders whose decisions are shaped by their own sense of mission; the higher purpose to which they have dedicated themselves and their schools; the cause that gets them out of bed every morning.

Gamers, by contrast, are the minority of leaders whose decisions are overwhelmingly shaped by the government's demands – by the constantly changing tests and targets against which their performance and the school's quality will be judged.

In between them are the vast majority of heads who are neither gamers nor missionaries but pragmatists, doing the best they can for their pupils in the circumstances.

2.1 The Gamers

No one enters the teaching profession to play the education-by-numbers game. But some end up having to play the game anyway, driven to do so by the irresistible logic and remorseless pressure of the system.[11.]

Anyone who has seen the highly acclaimed American television series The Wire will recognise the phenomenon – the daily dilemmas faced by honest public servants forced to choose between doing the right thing and the expedient thing.

Although billed as a crime drama, *The Wire* is actually a sociological examination of the modern American city and of the impact its institutions have on those who work in them. It tells the story of a parade of battered idealists and would-be heroes in the police force, the city government, the courts and the school system, and how they are required to battle not only the forces of poverty, crime and addiction on the streets of west Baltimore, but against the warped logic, skewed priorities and perverse incentives of the public bureaucracies in which they work. Their jobs may differ, but they are all daily confronted by the same realisation: that fidelity to the higher purpose or calling that first drew them to their profession is emphatically not what will secure their survival or advancement now that they're in. They understand only too well how the system works, but can do nothing to alter it. Insiders who challenge the rules of the game tend to pay a heavy price. Those who don't tend to drink, heavily.

Our school system, with its tests, targets, league tables and inspections, has become just such a game; a bureaucratic numbers game that all too often pits narrow institutional interests against the wider public interest, forcing teachers and school leaders to choose between helping their students and helping themselves. That is the unavoidable consequence of the fact that the same tests used to assess pupils' learning are used to measure school and teacher effectiveness. The result is that good decisions that would deliver long-term benefits to pupils but are unlikely in the short-term to show up in test scores tend not to be taken, while bad decisions that are not in the long-term interests of pupils but are likely have a positive immediate impact on test scores do get taken. Proof that in high-stakes, low-trust systems, what gets measured gets done, and what doesn't, doesn't.

The distortions to professional priorities and practice that result take many forms, most of which represent nothing more than a rational response to the incentives the accountability system creates and the instructions, whether implicit or explicit, the government sends. And, in those cases, most people would agree that the lion's share of the blame rests with the policymakers who write the rules of the game, not the practitioners who are forced to play by them.

11.   Weale, S. (2017) *Ofsted to investigate schools 'gaming system' to move up league tables* The Guardian. Available at: www.theguardian.com/education/2017/mar/10/ofsted-to-investigate-schools-gaming-system-to-move-up-league-tables

But there are some practices that cannot be blamed on others.

The number of teachers caught engaging in acts of outright cheating is small, but rising. There were 388 penalties issued to teachers for assisting pupils in A-level and GCSE exams in 2016, up from 262 in 2015 and 119 in 2014, although considering how hard some forms of cheating are to detect, this is likely to understate the true scale of the problem. [12]

A different, arguably less deliberate form of cheating, is the tendency for teachers to over-mark the coursework component of modular qualifications, leading to the attainment of higher-than-deserved grades. The most eye-catching recent example being the results posted by the large number of borderline GCSE students who, in 2011, sat AQA's tier 2 English language exam – 71 percent of them achieving a C grade or higher in the teacher-marked "speaking and listening" component, 65 percent in the teacher-marked coursework component but only 4 percent in the externally-marked written exam.[13] In the report that followed the publication of these and other suspiciously volatile results, the regulator Ofqual concluded:

> "While no school that we interviewed considered that it was doing anything untoward…many expressed concerns that other nearby schools were overstepping the boundaries of acceptable practice. It is clearly hard for teachers to maintain their own integrity when they believe that there is a widespread loss of integrity elsewhere. No teacher should be forced to choose between their principles on the one hand and their students, school and career on the other." [14]

A particularly offensive practice which is beginning to attract greater media attention is that of schools boosting their scores by taking deliberate steps to attract pupils who are likely to push those scores up and get rid of pupils who are likely to drag those scores down. This is done by manipulating the admissions system to select high attaining pupils, and by permanently excluding or, more commonly, 'managing out' harder-to-teach students whose continued presence in the school threaten its league table standing. Recent findings from the Institute for Public Policy Research (IPPR), revealed the full scale of this practice.[15] Although the official statistics show that 6,685 pupils (or 35 a day) were permanently excluded from school in 2015-16 (the majority of them in the run up to GCSEs), the researchers claim that even this 40 percent increase over three years massively understates the rate at which overall exclusions are growing. They point out that 48,000 children are being educated in alternative provision for excluded pupils, and that many more are leaving school for

12. Turner, C. and Scott, P. (2016) Cheating teachers on the rise: Number of staff illicitly helping students pass exams trebles. *The Telegraph Online* [online] 16 December. Available at: www.telegraph.co.uk/education/2016/12/13/cheating-teachers-rise-number-staff-illicitly-helping-children/

13. Ofqual (2012) *GCSE English 2012*. [pdf] Office of Qualifications and Examinations Regulation. Available at: webarchive.nationalarchives.gov.uk/20141031163546/http://www.ofqual.gov.uk/files/2012-11-02-gcse-english-final-report-and-appendices.pdf

14. Ibid.

15. Gill, K. et al (2017) *Making the difference: breaking the link between school exclusion and social exclusion* IPPR. Available at: https://www.ippr.org/files/2017-10/making-the-difference-report-october-2017.pdf

'elective' home education, the rate of which has doubled over the past four years. Overall, the researchers estimate that the number of children being illegally excluded is in the "tens of thousands".

Research from Education Datalab, another thinktank, while stopping short of making specific allegations against named schools, demonstrated how the worst offenders would have seen their GCSE pass rates fall by a full 17 percent had all the pupils who were moved 'off-roll' between year 7 and year 11 remained in the school.[16.] To understand the full consequences of this practice, one needs only to consider the fates of those pupils who get shunted out. Where the proportion of pupils nationally who achieve five or more good GCSEs including English and maths stands at almost six in 10, the proportion of 'movers' clearing that hurdle varies from 40 percent if they move to a mainstream school, 30 percent if they move to a university technical college or studio school and just one percent if they move to a special school or into alternative provision.[17.]

More common and less egregious examples of gaming, some of which the government has since moved to close down, include the decision to focus the school's attention and resources on pupils who are close to the pass-fail threshold and on subjects that are counted (or that count double) for the purposes of accountability, to the detriment of pupils and subjects that will make less of a difference to the school's chances of hitting government performance targets. These decisions are rational from the school's perspective but have a very real negative impact on the large numbers of children who are well above or below the crucial C/D borderline, or have a passion or aptitude for a subject that doesn't show up in league tables.

Another is the tendency for schools to seek out the easiest qualifications to achieve and to steer large numbers of pupils towards them, regardless of whether they are of interest or value to the learner. Entering students for whom English is an additional language (EAL) into a GCSE examination in the modern 'foreign' language (MFA) they speak at home is one example. A second, which has attracted a good deal of media coverage over the last year or so, is the large number of pupils entered for the European Computer Driving Licence (ECDL) IT qualification that is deemed equivalent to a GCSE for the purposes of accountability. Entries to this fast track qualification, which can be taught in as little as three days, rose 350 percent in a single year, up from 26,250 in June 2015 to 117,200 in June 2016.[18.] Further research from Education Datalab has shown how pupils taking the qualification average the equivalent of an A grade despite achieving below a C on average across their other GCSEs.[19.]

16. Nye, P. (2017) *Who's left? How much do leaver rates vary from school-to-school?* Education Datalab School accountability Blog [blog] 17 February. Available at: educationdatalab.org.uk/2017/02/whos-left-how-much-do-leaver-rates-vary-from-school-to-school/

17. Nye, P. (2017) *Who's left: The main findings.* Education Datalab School accountability blog [blog] 31 January. Available at: educationdatalab.org.uk/2017/01/whos-left-the-main-findings/

18. Staufenberg, J. & Dickens, J. (2016) *Fast-track ECDL IT qualification pass rate soars by 350%.* Schools Week [blog]. Available at: schoolsweek.co.uk/fast-track-ecdl-it-qualification-pass-rate-soars-by-350/

19. Thomson, D. (2016) *Does Ofqual also need to look at the grades awarded in non-GCSE qualifications?* Education Datalab [blog]. Available at: educationdatalab.org.uk/2016/05/does-ofqual-also-need-to-look-at-the-grades-awarded-in-non-gcse-qualifications/

Yet another, until recently, was the tendency to enter pupils for GCSEs a year or two early – even though the data shows they were likely to achieve a lower grade as a consequence – so the school could bank the C or B grade pass and enter the pupil for more exams, often in the same domain, the next year, or, in the event that they failed, give them another go at clearing the threshold.[20]

Behind all these tricks is a clear trend towards narrowing, with primary schools reducing their key stage 2 curriculum to little more than reading, writing and maths in year 6 and secondary schools curtailing the deliberately broad key stage 3 phase at the end of year 8 to give themselves and their students an extra year to prepare for GCSEs.[21] Ofsted reports that a quarter of secondary schools are now extending their key stage 4 from two to three years, with the result that 12 year olds are being asked to make path determining choices, with key subjects like history, geography and languages being dropped a year early. Considering that key stage 3 is designed specifically to expose children, for the first and last time in their lives, to the widest possible range of academic subjects, this is a genuine shame.

So important are all these tactics, short-cuts and quick-wins to schools, that thousands of them have joined organisations like the PiXL club (Partners in Excellence) which, in return for a fee, provide advice about how to meet the demands of the government's accountability system or, in the words of former education secretary Michael Gove, about how "to game the system…and use the student as a means of gathering points so that the school can look better."[22]

It is worth repeating the point: apportioning blame for such practices in a system where the incentives to engage in them are so strong is far from straightforward. As PiXL's Chairman Sir John Rowling put it when challenged over his organisation's energetic promotion of the ECDL qualification: "There is a real crisis in schools. The interests of kids and schools are set at odds against each other by the system. I don't sit in judgment of schools that live in fear of their jobs."[23]

The most insidious way in which the assessment and accountability systems have distorted professional practice and hollowed out the education children receive cannot really be described as gaming at all, if by that we mean the deliberate manipulation of the system. Rather, it results from the tendency to teach to the test, a practice that subverts the purposes of education in ways so subtle that most teachers don't even realise they are doing it and wouldn't, in all probability, think they were doing anything wrong if they did.

20. Paton, G. (2013) Crackdown on schools that 'cheat' the GCSE system. *The Telegraph* [online]. Available at: www.telegraph.co.uk/education/educationnews/10342444/Crackdown-on-schools-that-cheat-the-GCSE-system.html

21. Spalding, C. (2017) 'Why we must resist the lure of starting GCSE courses in KS3', TES [online] www.tes.com/news/school-news/breaking-views/why-we-must-resist-lure-starting-gcse-courses-ks3

22. Paton, G. (2013) Crackdown on schools that 'cheat' the GCSE system. *The Telegraph* [online] Available at: www.telegraph.co.uk/education/educationnews/10342444/Crackdown-on-schools-that-cheat-the-GCSE-system.html

23. Dickens, J. (2015) EXCLUSIVE: Schools urged to enter pupils for fast-track ‹GCSE› taught in just 3 days. *Schools Week* [online]. Available at: schoolsweek.co.uk/schools-urged-to-enter-pupils-for-a-fast-track-gcse/ [Accessed 12 Oct. 2017]

This is unsurprising. Compared to the more outrageous and deliberate ways of playing the system listed above, teaching to the test is a more morally ambiguous and complex problem. As Sam Freedman, the executive director of programmes at Teach First and former policy advisor to Michael Gove, put it to me: "You could argue that if your students have to sit a test, and you know how important passing that test is to their future prospects, it would be immoral not to teach to the test."[24] A refinement of the same argument was made by Gove himself when he argued that there's nothing wrong with teaching to the test if you have a good test.

As Freedman and Gove both know, they are only right up to a point. Certainly, exam success opens doors to life-changing opportunities that will likely remain shut to the unqualified, and for that reason, sending a student into the exam hall not knowing what to expect, having never been schooled in the basics of exam technique, would indeed be immoral. And if the test is a good one, it is hard to see what harm can come from doing everything possible to prepare them for that test. But pull at the threads of these arguments and they quickly unravel.

Yes, good exam results open doors, but those doors are to opportunities, not to certain success. Whether students can seize those opportunities depends on whether they actually possess the knowledge and skills suggested by their exam grades. But as assessment expert Daisy Christodoulou explains in her book *Making Good Progress*, there are a number of reasons why the inferences we want to draw from pupils' performance in exams may not be valid. Most of these relate to the way exams and tests are structured and marked. However, as Christodoulou explains:

> "There are other, subtler, threats to validity, which may not immediately seem as though they are that damaging. Indeed, in some cases they may even seem to represent good practice. Take the common practice of coaching in the details of the exam question. Most UK exam textbooks devote large amounts of space to preparing pupils to answer various types of question: 8-mark questions such as 'The use of propaganda was the main reason the Nazis were able to control the German people. How far do you agree with this view?' or 16-mark questions such as 'The Wall Street Crash was the main reason Hitler got into power. Do you agree?' This is one of the features of such textbooks that led Tim Oates [group director at Cambridge Assessment] to criticise them for having 'highly instrumental approaches to learning, oriented towards obtaining specific examination grades'. These 8-mark and 16-mark questions are features of the sample, not the domain. They do not correspond to the types of problems pupils will face in real life so, if pupils have focussed excessively on these types of questions, it will compromise the validity of those results."[25]

This is the essential problem with teaching to the test: not only is it dispiritingly instrumental, but it doesn't actually lead to learning of any lasting value or utility. The school posts the numbers it needs to keep the

24. In conversation with the author (November 2016)
25. Christodoulou, D. (2017) *Making Good Progress: the future of assessment for learning.* Oxford University Press

government at bay but which don't tell an accurate story about the quality of the education it has provided. And the students bank the scores they need for further study or a skilled job, both of which will likely present challenges for which they are not properly prepared. This is a direct consequence of having been coached in ways that, in the words of Harvard Professor of Education Daniel Koretz, "generate gains that are limited to a specific test and that do not generalise well to other tests of the same domain or to performance in real life."[26]

To reveal the gap he predicted would exist between the inferred and the actual knowledge possessed by students who had been taught to the test, Koretz compared the results achieved by the same American pupils on two different standardised multiple-choice maths tests that were both samples of the same domain, differing only in the details.[27] On the official high-stakes test used to judge school performance – a test for which the pupils were specifically and extensively coached – they performed significantly better than on the other, despite the fact both tests were seeking to measure their understanding of the same broad content. In the context of the English school system, Durham University's Professor Robert Coe's finding that, over the last three decades, significant improvements in GCSE and other high-stakes exam results have not been accompanied by equivalent improvements in other assessments of the same domain, is suggestive of the same phenomenon.[28] Indeed Christodoulou posits the theory that this may explain why year-on-year increases in maths and English GCSE results haven't translated into a higher ranking for English students in the international literacy and numeracy league tables compiled by the OECD.[29]

Christodoulou, in a recent paper for The Centre for Market Reform of Education (now the Centre for Education Economics), offers yet more evidence of widespread teaching to the test, noting that:

"Researchers in both countries [the US and the UK] have identified the existence of a 'sawtooth pattern' in the results of national, high-stakes assessments such as GCSEs in the UK. The sawtooth pattern sees test results rise gradually as schools, teachers and pupils become familiar with a particular test specification, only for results to fall when a new specification is introduced. This suggests that the initial increase in test results is not being driven by secure and genuine improvements in teaching and learning, but instead by familiarity with the structures and typical patterns of a particular specification…. Similarly, when looking at the types of revision materials and advice given to schools and students, one can see that lots of it is designed with very specific exam structures in mind. For example, in history, many revision guides give over almost a third of their pages to exam-board specific instruction in dealing with the 4-mark, 8-mark and 16-mark question. In maths, one school improvement organisation has produced an approach to revision called 'Beyond the Staples',

26. Koretz, D. (2008) *Measuring Up: What Educational Testing Really Tells Us.* Cambridge: Harvard University Press.
27. Ibid.
28. Coe, R. (2013) *Improving Education: a triumph of hope over experience.* Durham: Centre for Evaluation and Monitoring
29. Op cit

which identifies the types of questions in the second half of the exam paper (ie, those beyond the staples of the exam booklet) which are not as difficult as some of the others, and which should therefore be targeted by low-attaining pupils."[30.]

Teaching to the test may not be gaming as normally understood, but the result is no less damaging. By teaching what will be tested, rather than testing what has been taught, we end up losing sight of education's core purpose. By mistaking the sample for the domain, the proxy for the goal, we have created a system that is perfectly designed to deliver exam success rather than education's ultimate aims like professional accomplishment, personal fulfilment or societal progress. What is more, by doing so – by narrowing and hollowing out young people's experience of education until its power to instil wonder and fascination has completely disappeared – we risk extinguishing their natural inquisitiveness and putting them off learning for the rest of their lives; a high price to pay for hitting the latest administrative targets.

As countless surveys demonstrate, the legions of honest and committed teachers who work in our schools pay a heavy price in terms of morale and professional self-esteem for their forced collusion in this elaborate, resource-sucking, time-consuming game. But, as a recent study published in the Harvard Business Review makes clear, the most skilled gamers – those who best understand the rules of the game – can do very well out of it indeed.[31.] By analysing the changes made by headteachers in 160 secondary schools in England, the report's authors were able to segment them into five groups, each defined by their approach to school improvement. They found that the most highly paid (average salary £150,000 p.a. versus less than £100,000 for across the other four groups) and most decorated group of headteachers (two thirds had received a knighthood or other national honour), were those who focused on short-term success at the expense of the long-term – a group they named the 'surgeons'. The authors found that the dramatic and quick improvements they delivered were achieved by removing the worst performing quarter of pupils, firing 10 percent of staff, cutting out non-essential activities, allocating the best teachers to the year groups sitting exams and focusing relentlessly on test preparation and revision. But as the authors explained:

> "These examination results don't last. After the Surgeon leaves, exam scores fall back to where they started, mainly because younger students have been ignored and under-resourced for the previous two years. It's impossible to close this gap, no matter how hard everyone tries. Some parents claim it's because the new leader isn't strong or decisive like the old one, but the teachers know it's the result of two years of cuts without any investment. In the meantime, buoyed up by an undeserved reputation, the Surgeon has moved on to their next patient."[32.]

30.   Centre for Education Economics (2017) *Annual research digest 2016-17: Evidence on uses of technology in education* [online]. Available at: www.cfee.org.uk/sites/default/files/CfEE%20Annual%20Research%20Digest%202016-17%20-%20web%20version.pdf

31.   Hill, A., Mellon, L., Laker, B. and Goddard, J. (2016) *The One Type of Leader Who Can Turn Around a Failing School* Harvard Business Review, updated 3 March 2017 [online] Available at: hbr.org/2016/10/the-one-type-of-leader-who-can-turn-around-a-failing-school

32.   Ibid.

Despite the many undeserved honours it has handed out, the government is wising up to the problem of gaming, and to the artificially inflated scores and reputations it produces. When examples of teacher cheating are uncovered, monitoring is increased. When the over-marking of modular qualifications is detected, teacher-assessed coursework is replaced by externally marked exams. To prevent schools excluding a low attaining pupil without good reason, the government rules that the costs of educating that child will continue to be met by the school that excluded them. To overcome the problem of schools focusing only on borderline pupils, the government introduces Progress 8, an accountability measure that gives equal weight to the progress made by all pupils, regardless of their attainment. To tackle the problem of entering pupils early and, if need be, repeatedly, for the same exam, the government rules that only grades achieved the first time round will count towards league tables. To tackle the problem of schools entering pupils for relatively easy but low value qualifications, the government changes the rules about what is or is not deemed 'equivalent' to a GCSE or what does or does not count towards a school's overall performance score. But this is the bureaucratic version of the 'whack-a-mole' fairground game. No sooner has an abuse been identified and closed down than a new one pops up somewhere else.

Those who doubt this should have witnessed the explanatory sessions for headteachers that the DfE organised to explain the workings of the Progress 8 measure in the run up to its introduction. As someone involved recalls:

> "We would start by explaining how pupils' English and maths scores would be counted double in Progress 8, and that, although every pupil would be required to take both English language and English literature, only the higher of the two English results would be doubled. I'd then start silently to count the seconds in my head knowing that, as had happened at every other such meeting, no more than five seconds would elapse before someone would ask "Does it matter if the student fails the other one?"[33.]

The lesson? The rules may change, but the game goes on.

33.   In conversation with the author (July 2017)

2.2 The Missionaries

The missionaries are a different breed. Yes, they recognise the need for transparency and accountability to ensure money is well spent and children well taught. And yes, they understand the importance of exam success for their students, recognising that without it, life-changing opportunities and life-enriching occupations will likely remain beyond reach. But they also recognise there are lots of things a good exam grade doesn't tell us about the student who achieved it, like whether the knowledge they've acquired is likely to prove superficial and temporary, as is likely if they've been intensively taught to the test.

What is more, the missionary knows that exam success tells us little about a student's ability to put their education to use – to work with others, in real life situations, under time pressures, learning from, and not being disheartened by, mistakes, showing initiative, spark and leadership. They know an A* or a grade 8 or 9 doesn't tell us whether the pupil enjoyed learning the examined facts, or learning in general, or whether, having aced the exam, they are determined to keep on learning, fuelled by a sense of curiosity and wonder. And they know it doesn't tell us whether they are happy, kind, selfless or brave – whether they will go out into society determined to help others, to stand up to injustice and make a positive difference.

Yet all of these things matter more – far more – to the missionary than whether their pupils have been successfully coached in the techniques of answering an 8-mark or 16-mark question.

The school leaders I visited in preparation for this report are all missionaries. Despite their many and important differences, they have one thing in common: they are all driven by a sense of purpose that goes well beyond meeting the demands of the government's accountability system. What that purpose is varies from school to school.

Michaela Community School in Brent, where visitors are greeted by a large sign declaring "Knowledge is Power", is all about the life changing potential of a knowledge-rich education; about giving children from deprived backgrounds the cultural literacy needed to compete with their more privileged peers.

XP School in Doncaster, inspired by High Tech High and the Expeditionary School movement in the US, is all about developing the skills and capabilities that are deemed most important to success in the workplace and the world, and about doing so through enquiry-based, real-world "expeditions" or projects.

Shireland Collegiate Academy in Smethwick in the West Midlands is blazing a trail for those who believe not only that the traditional school model needs to be completely reinvented for the new century, but that technology now allows us to do that in ways that make learning more personalised, assessment more useful, the curriculum more dynamic and parent and community engagement more meaningful.

Reach Academy in Feltham is all about building a culture of high expectations and even higher aspirations in the belief that any child, no

matter how disadvantaged, can achieve remarkable things with the right support in place. That support, however, goes well beyond teaching. Inspired by the Harlem Children's Zone,[34] Reach's founders are committed not just to running a great school, but to building a strong and resilient community, with plans in place for an on-site hub, out of which a range of social programmes will be delivered.

School 21 in Stratford is designed not only to prepare children for the future but to teach them that "today matters"; that they don't need to wait for adulthood to produce beautiful work of real value to authentic audiences. The same spirit – that education shouldn't all be about sacrifice and suffering now in the hope of some future return – also underpins the school's emphasis on child wellbeing and the development of pupils' speaking skills, the means by which they help them find their voice, literally and metaphorically.

West Rise Junior School in Eastbourne is focused on character development; on providing pupils with unforgettable outdoor experiences (from firing a shotgun to herding water buffalo) designed to teach them discipline, responsibility and self-control, the pre-conditions for a life of freedom and discovery.

The Plymouth School of Creative Arts is committed to developing its students' creative capacities and providing them with an aesthetic education that showcases the beauty, utility and satisfaction to be found in great art, clever design and true craftsmanship. It is a place for making and creating.

Broadlands and Ashgrove are two apparently quite ordinary primary schools in deprived neighbourhoods on opposite sides of the country that are showing the extraordinary things that teachers can achieve when they devote themselves completely to the children in their care and are prepared to do whatever it takes to dismantle the many barriers to learning those children face.

Bealings School in rural Suffolk is committed to building a child-centred, child-sized, experiential learning environment and to a pedagogical model known as Mantle of the Expert in which children are taught, or more accurately, helped to learn, through role-play, drama and discovery.[35.]

Bedales, a fee paying school in Hampshire, defines itself by its humanity (the school was established to provide a humane alternative to the regimented austerity of Victorian schooling) and through its holistic educational philosophy, summed up by its motto "to educate the Head, Hand and Heart". It strives to introduce its students to what is true (academics), what is beautiful (creativity and making) and what is right (morals and ethics).

And the West London Free School is committed to delivering – for free and to all – the type of classical liberal education normally reserved for those who attend grammar or private schools. Its stated purpose is:

> "not primarily to prepare pupils for a job or career [but to] transform their minds so that they are able to make reasonable and informed judgments

34. Harlem Children's Zone. (n.d.) Home - Harlem Children's Zone. [online] Available at: hcz.org/ [Accessed 12 Oct. 2017]

35. Taylor, T. (2016) A Beginner's Guide to Mantle of the Expert: A Transformative Approach to Education

and engage fruitfully in conversation and debate – not just about contemporary issues but also about the universal questions that have been troubling mankind throughout history."[36.]

All of them are highly distinctive, mission-oriented schools with a clear sense of their own identity and purpose. You don't have to be persuaded by everything they do, or be able to imagine choosing them for your own children, to recognise the value of the diversity they bring to the system. This diversity matters.

It matters because difference is a precondition for meaningful choice; it increases the chances of parents finding a school that matches their educational philosophy and their child's interests and aptitudes.

It matters because difference allows for informed comparison; for a more sophisticated understanding of the relative strengths and weaknesses of different models of schooling, of the different outcomes they are likely to deliver, and of the compromises and trade-offs bound up in each.

And it matters because difference is a sign of a healthy system – evidence of the innovation and experimentation that drive progress.

But it matters most of all because mission-oriented schools, by their very existence, expand and enrich the conversation about education's purposes, and force us to re-examine our assumptions about what a good school looks like.

With our obsession with tests and targets leading to widespread gaming and teaching to the test, which in turn has led to a narrowing and hollowing-out of the education our children receive, this is something everyone – progressives and traditionalists alike – should celebrate.

36. West London Free School (n.d.) *Our Vision*. Available at: www.wlfs.org/Our-vision/

The Ideal School Exhibition

Part Two

Chapter 3: Defining and embedding the mission

This chapter looks at how the schools I visited – each of them a highly successful mission-oriented school – stay true to their mission. It looks, in other words, at how they resist the magnetic pull of the accountability system that could, if they weren't sufficiently clear about, or committed to, their own values and aims, drag them across the green line that separates them from the education-by-numbers game.

Values, aims, design principles

Almost every school in the country has a motto, with three-word statements of ambition and compassion ('Learners, Achievers, Friends' or such like) particularly popular. But these are normally sufficiently vague not to hint at costs or consequences. They don't force decisions and choices. They don't commit to, or even say, anything with which anyone could disagree.

Mission-oriented schools are different. Their mission statements amount to a vision. And that vision reflects their values – their attitude to things like authority, obedience and tradition, or freedom, independent-mindedness and non-conformity. Whereas in most schools, the headteacher and perhaps one or two senior colleagues can talk fluently about the school's ethos and purpose, in a mission-oriented school everyone can, the pupils included. Stop anyone in the corridor of one of these schools and the chances are they'll be able to explain why their school is different, why that difference is a strength, and why they feel lucky or proud to study or work there.

Of the schools I visited, it was the oldest and the newest that felt most distinctive and most certain of their own identity, the former having used

the passing of time deliberately to weave their philosophy and ethos into the fabric of the school's life; the latter, using their lack of history and the one time only opportunity of a completely blank slate to set out a clear vision, uncluttered by past events and outside influences.

Although I could reference most of the schools I visited to make the point, the example of two in particular demonstrates how to turn a clear set of values into a purposeful mission statement, which in turn can be made manifest in the practices and protocols of every day school life. They are Bedales, a 125 year-old independent school in rural Hampshire, and School 21, a five-year-old state school in Stratford, East London – both of them what social commentator Charlie Leadbeater would describe as a "creative community with a cause."[37.]

Everything Bedales does is designed to achieve one or more of the following five aims:

Aim 1. To develop inquisitive thinkers with a love of learning who cherish independent thought

We aim to create an environment where questioning, divergent thinking and the freedom to learn from mistakes are all encouraged. First rate teaching and learning, with formative and summative assessment, must underpin academic excellence. These qualities, which create lifelong learners and develop both critical and creative thinking, should permeate every area of our lives – whether that be in assemblies, conversations or classrooms. In a national educational environment, where schools are more constrained by exams than ever before, this need is especially important. We are committed to imbuing in all our children these qualities: responsibility for their own learning, good work habits and a sense that learning can thrill and invigorate.

Aim 2. To enable students' talents to develop through doing and making

Great value has always been attached to first-hand experience at our schools. This aim means that excellent resources and ample time are provided for creative and practical activities. When the school moved to its present site the students were involved in making the main school building. For our students, the ability to be involved in practical spheres – "hand work" as opposed to "head work" – pushed the outdoor work to the fore. Sport has also played an increasing role in the school's life. We believe that within the curriculum hands-on experience should infuse our students' learning.

Aim 3. To foster individuality and encourage initiative, creativity and the appreciation of the beautiful

We see these qualities as both being life-enhancing and increasingly valued in a world of work where a premium is put on intellectual capital and creativity. Individuality must flourish, but within a clear moral structure: there must be a good balance between the rights of the individual and the individual's responsibility to the community. Whilst the boarding experience at Bedales and Dunhurst especially helps boarders learn this balance, the shared sense of purpose between boarders and day students allows this experience to be common to all. The opportunities for leadership encourage the problem-solving initiative-taker. We seek all opportunities to develop the connection between the moral, spiritual and aesthetic capacities of our students through contributing to the community via such events as music, drama, Outdoor Work and student-led enterprises.

37.   Leadbeater, C. (n.d.) Learning to Make a Difference: School as a Creative Community. [ebook] WISE Matters. Available at: www.wise-qatar.org/sites/default/files/wise_matters_learning_to_make_a_difference.pdf [Accessed 12 Oct. 2017]

> **Aim 4. To enable students, former students, parents and staff to take pride in the community's distinctiveness and to feel valued and nourished by the community**
>
> Central to our schools' success is the sense that each person is a member of the community whose voice is entitled to be heard and be treated with respect. Staff and students expect of each other the best kind of relationships - co-operative, authentic, trustful and tolerant ones. In this respect the school community and environment should enable all members of the community to feel that they are learning and developing.

> **Aim 5. To foster interest beyond the school: engaging with the local community and developing a national and international awareness**
> We see interaction with the world beyond the school gates as central to the values of kindness, fellow-feeling and co-operation that underpin the humanity of our community. With this in mind, students have age-appropriate opportunities to work alongside others, locally, nationally and globally.

For the visitor, the "Bedales difference" as it is described on the school's website, is everywhere to see. It is there in the student-constructed buildings, artefacts and landscapes of the school estate. It is there in the quirks of the school's systems and routines, and in the names by which they are known (BACs, Blocks, Brekkie, Jaw, etc). But it is there, most of all, in the school's culture; in the human relationships that give the community its character – relationships that are characterised by the first-name terms on which adults and children interact and codified by rituals like the twice-weekly handshaking between all staff and students. As the school's head of philosophy and religious studies, Clare Jarmy, explains, although some of these practices may appear odd to the outsider:

> "There are a lot of things we can't understand by observation alone. A Muslim friend…once pointed out that if you walk into the back of a mosque, and don't understand what ideals lie at the heart of Islam, all you see is lots of bottoms in the air! To understand why we shake hands at Bedales, you have to understand our ideals: teachers and students in partnership, working together on teaching and learning…working together to create the community and ethos of the school… [recognising that] respect is not something to be expected because of status, but something that everyone deserves by virtue of being part of the school community."[38.]

The School 21 jigsaw is another example of a set of carefully selected, thoughtfully assembled, mutually reinforcing design principles that help turn a high-level vision into a practical project.

As at Bedales, deliberate steps have been taken to ensure that these aims and supporting practices are underpinned by protocols and rituals that constantly reinforce the school's values. For example, by putting substantive hour-long assemblies, held 'in the round', at the centre of school life, and by using the so-called Harkness method – a practice in which children sit at a large oval table to discuss ideas with only minimal teacher input – the school lives out the belief of its founder and Executive Headteacher, Peter Hyman, that, where the 20th century was all about

---

38. From the Bedales website. Available at: www.bedales.org.uk/home/history-bedales/bedales-handshaking-assembly

rows, the 21st century is about circles: "They're about unity, equality and democracy. Whereas in a row you can end up isolated on the end, or stuck at the back."[39.]

Integrated technology
On-line courses
One to one devices
Professional portfolios

Real world learning
Design thinking
Inter-disciplinary projects
Service learning – making a difference
Work placements
Creativity and immersion
STEM/Design and making
Networking, entrepreneurial ism and internationalism
Parent/family/community partnerships
Adventure 21

Authentic assessment
Portfolios
Exhibition
Story of Learning
Range of assessments (CJ)
International benchmarks
Assessing more than academics

Building Learning Capacity
Learning how to learn
Memory skills/Knowledge
Study and revision skills
Cognitive skills –Harkness/CASE/P4C
Planning and organisation skills
Craftsmanship

school21
FOR SUCCESS IN THE 21st CENTURY
Identity
Growth
Well-being
Control
Belonging

English Language
Oracy – physical, cognitive ,linguistic, social/emotional
Reading for pleasure
Writing with style
Cultural Literacy

21st century teacher
Collaborative, developmental culture
Cross phase and departments
Networked, agile, learning, open
Repertoire of teachers
Teacher training

A tailored 4 to 18 journey
4 to 18 knowledge pathways
4 to 18 skills pathways
Reinvention of vocational and technical options
Primary/Secondary collaboration

Student Leadership
Peer learning, teaching, coaching,
Becoming an expert
Leadership of key aspects of school
Personal plan and one to one coaching

The School 21 jigsaw, like the above articulation of 'the Bedales difference', is as interesting for what it doesn't include as what it does. For example, if, like both these schools, you want to educate the head, heart and hand (ie focus not only on academics but on character development and wellbeing, creativity and making) that might mean less time to concentrate on the Ebacc (a measure of attainment in the core academic subjects). If you want to develop your students' ability to communicate in spoken English that might mean less time spent teaching students to speak other languages. If you want to use project-based learning, that means committing sufficient time to designing and delivering projects knowing that this might have consequences for curriculum coverage, raising interesting questions about the conscious trade-offs the school's leaders are making between depth and breadth.

These are the hard-edged choices that mission-oriented schools make – choices with consequences; choices that come with opportunity costs; and choices that carry very real risks for the school's leaders when they run counter to the implicit instructions the government sends through its accountability measures.

39.   Warrell, H. (2015) School 21: 'free school' where circle time beats exam coaching. [online] *Financial Times* Available at: www.ft.com/content/61f62fde-6c0f-11e5-8171-ba1968cf791a [Accessed 13 Oct. 2017].

Chapter 4: Pursuing the Mission: challenges relating to practice

It would be absurd to suggest that every difficulty or challenge mission-oriented schools face relates to the accountability system or the external policy environment. Or even that clarity about one's values and aims, and attentiveness to the question of how those values and aims might be embedded in the rituals and routines of everyday school life, are sufficient pre-conditions for success.

What you teach (curriculum), how you teach it (pedagogy), and how you know whether you are succeeding (assessment), all matter. Get these wrong and your school risks falling through the green line in the table below – the line that separates the best from the rest of England's mission-oriented schools.

This section looks at the risks and challenges relating to practice that these mission-driven schools face, and at how some of those risks and challenges vary according to the nature of the school's mission.

	Gamers	Missionaries
Highly successful		
Less successful		

4.1 Areas of agreement…and disagreement

All the schools I visited were agreed on one thing: that an excellent school must, alongside its other objectives, deliver an excellent academic education. The fact the government measures only some of the things that schools should be doing, and that the very process of trying to measure them leads, inevitably, to damaging distortions of professional priorities and practice, doesn't mean the things it does measure don't matter. Quite the opposite. Literacy and numeracy are fundamental. They provide the foundations on which all other academic enquiry stands. Without them, a child cannot access the broader secondary curriculum – the natural sciences, humanities and the arts – that is their right. For it is within these disciplines that they will develop a fuller understanding of themselves and the world in which they live, and by doing so, enter into the "great conversation of mankind."

The consensus pretty much ends there, however. Across the mission-oriented schools I visited, I encountered fundamentally different views about the purpose and character of academic study, which in some cases produced some surprising and unlikely alliances. On the whole though, the schools divided into two broad camps: those that are seeking, first and foremost, to develop students' skills, capabilities and characters through student-led, project-based learning, and those that are seeking to expand students' knowledge – their cultural literacy – through teacher-led, didactic instruction.

The dichotomies over which they divide include:

- Whether the primary value of academic study is to be found in the knowledge that is studied, or in the skills, capabilities and habits-of-mind developed in the process of studying it.
- Whether knowledge is an intrinsic good – an end in itself – or an instrumental good – the means to an end; further study say, or a rewarding job.
- Whether a rigorous academic education is appropriate for all students or only some, and what that means for the balance between academic and vocational provision at different ages.
- Whether the higher-order cognitive skills that are most valued in work and life – problem solving or critical thinking for example – are generic and transferrable, or whether they only exist in a meaningful sense, and therefore can only be developed and applied in the context of the knowledge domain within which the 'problem' is situated, or about which the student is being asked to 'think critically'.
- Whether the same is true of so-called non-cognitive skills and character traits like resilience or perseverance, and what that means for the curriculum and the way it is taught and assessed.
- Whether teaching and learning should take place within traditional subjects or through cross-curricular or interdisciplinary enquiries and projects.

- Whether, to use a couple of well-worn phrases, the teacher should be a 'guide on the side' enabling and supporting independent, self-regulated learning, or a 'sage on the stage' providing direct and explicit instruction.
- Whether, to aid learning (and the ongoing diagnostic or formative assessment needed to support learning), topics should be broken down into more easily digested but de-contextualised pieces, or whether they are best offered up whole.
- Whether teachers should sugar the pill of academic content by thinking up imaginative ways of making it more relevant and engaging, or whether such sweetening simply denies students the opportunity to develop their palates and acquire new tastes.
- Whether engagement is a pre-condition for, or a consequence of, successful learning.
- When, and how often, students should be encouraged to express opinions, and on the relative importance of memorisation and recall on the one hand, and questioning and challenging on the other.

Regardless of precisely where on the spectrum between these two poles each school sits, there is one other immovable fact on which they are all agreed: if you want the freedom to pursue your own mission – to provide your own answers to these and other choices about what schools do and why – you need to satisfy the government that you can deliver on the core academic curriculum against its chosen measures. Sponsors, trustees, governors and school leaders run schools on licence; fall short and that licence can quickly be revoked. As Mike Fairclough, the principal of West Rise, the junior (and forest) school on the edge of a marsh in Eastbourne which places as much emphasis on character development as on academics, explained:

> "If we didn't deliver good results at Key Stage 2, we simply wouldn't be allowed to do all the other things we want to do. I don't complain about it. I'm running a primary school here. To argue that we shouldn't focus on English and maths would be like a milkman saying he wasn't interested in delivering milk."[40]

What sets West Rise apart from the other schools I visited that put non-academic objectives at the centre of their mission is the degree to which it separates out its character-building activities from its teaching of the core curriculum. The school is housed in a nice but perfectly ordinary building, where children wear a typical uniform, sit in traditional classrooms and are taught the national curriculum in a fairly conventional way. But out on the marsh, things are anything but ordinary, typical, traditional or conventional. There, Fairclough does his own thing, for his own reasons, according to his own rules. Indoors, his pupils sit in English and maths classes learning reading, writing and arithmetic. Outdoors, they fire guns and build fires, learning to how to manage risk, work in a team and take responsibility.

40. In conversation with the author (December 2016)

XP School in Doncaster, School 21 in Stratford and Shireland
Collegiate Academy in Smethwick, have all, in different ways, sought
to build a far more complex, layered model that allows them to pursue
multiple outcomes – academic and non-academic – at the same time.

Where, at most schools, the curriculum is taught within traditional
subjects, in these schools it is taught through projects, expeditions or
enquiries. Such approaches vary in certain respects, but all tend to have
an essential question at their core which, to be answered fully, requires the
student to range widely across subjects. A project about the role of the
East India Company in the British Empire, for example, might be used
to explore all aspects of 18th and 19th century British and Indian life,
touching on any combination of history, anthropology, religious studies,
politics, economics, geography, history of art, music, architecture, textiles
or food technology in the process. By following the question where it
leads, the teacher is able not only to teach the facts of each subject, but
to show how those facts and subjects relate to each other, emphasising
the essential unity of real-world knowledge. And by ensuring the central
question is a big and timeless one – perhaps, in this case, about the
positive and negative impacts of empire – they can explore the recurring
themes and dilemmas of the human story, showing how, while the actors
and the scenery change, the underlying issues often remain much the
same.

The layering doesn't end there however. By getting students to take
decisions about how the project or enquiry will be conducted, and how
they will work together to deliver a presentation, performance or product
at its end, projects and enquiries of this sort are also designed to promote
independence, collaboration, discipline, perseverance, leadership and
other performance-enhancing skills, attitudes, character traits and habits.
What is more, the project's designers often seek to do all of this in ways
that replicate real-life scenarios and environments, introducing students
to experts and specialists from the world of adult work, and requiring
them to perform or present to authentic audiences to make the project
more rewarding and meaningful. Finally, these projects are designed to
provide regular opportunities for feedback, reflection and evaluation so as
to develop students' metacognitive skills, or, in plain English, to help them
'learn how to learn' – widely seen by educationalists as one of the most
valuable skills of all.

Katharine Birbalsingh at Michaela Community School, Hywel Jones
at the West London Free School and Ed Vainker at Reach Academy would
likely all raise a sceptical eyebrow at the prospect of these time-consuming
activities. They would argue that a rigorous academic curriculum – the
best that has been thought or said – is a lily that needs no gilding, and that
it is demanding enough without over-elaborate teaching methods aimed at
multiple, interwoven learning objectives making it more bewildering still.
To them, the key to good teaching is simplicity. Teach within traditional
subjects, break subjects down into their smallest constituent parts, se-
quence them logically, explain them clearly and explicitly, and get students
to practice them until they have been mastered. Then, when the last fact
or concept is securely lodged in long-term memory, move on to the next.
And because, in the words of American educator E D Hirsch, "learning
builds on learning", with existing knowledge acting like "mental Velcro"

making it easier for new information to stick, the student will gradually become more capable, not only of memorising new facts, but of understanding their significance and meaning.[41] Thus, step by tiny step, the pupil makes the long journey from novice to expert, *led by a teacher* whose job it is to map and pace that journey, all the while checking what has and has not been learned, adjusting their instruction accordingly.

The school leaders I met who use project-based learning argue passionately and persuasively that it provides for richer and more meaningful learning experiences that support deeper understanding; that by transferring a significant amount of control over the project to students, it provides them with the sense of ownership and responsibility that are the hallmarks of self-motivated, independent learners; that by forcing them to work in groups, as well as individually, it teaches them the social and emotional skills needed to collaborate and to lead; that by culminating in some kind of product or production, it teaches them the value of drafting and redrafting, of learning from their mistakes, of persevering in the face of difficulty and of taking real pride in the quality of their work; and that by creating a systematic process for documenting and reflecting on learning, it helps students learn how to learn, with teacher feedback and self- and peer-assessment a central feature.

41. Hirsch, E.D. (1996) *The schools we need and why we don't have them*. Anchor Books

The Ideal School Exhibition

4.2 Challenges for schools that seek to develop skills through student-led, project-based learning

In setting out the challenges faced by different mission-oriented schools with different philosophies and approaches, it is important to understand that these are not insuperable obstacles, they are exactly what I am calling them – challenges. What follows, therefore, should not be taken as a list of reasons not to teach in a particular way, but as a list of risks and potential pitfalls that need to be borne in mind before employing a particular approach.

4.2.1 The scientific challenge to student-led, project-based learning

The school leaders I met who employ more traditional, didactic methods of instruction, oppose student-led and project-based learning for two main reasons: first, they see it as a highly inefficient way of teaching, which therefore carries a significant opportunity cost. And second, that they claim it ignores some key warnings from cognitive science about the nature of knowledge and skills and the way they are acquired or developed.

The active learning fallacy

The first problem – that of the opportunity costs associated with project-based learning – is illustrated by an anecdote that Professor Dan Willingham, a cognitive scientist, recounts in his book *Why Don't Students like School?*

> "A teacher once told me that for a fourth grade unit on the Underground Railroad he had his students bake biscuits, because this was a staple food for runaway slaves….[but] his students probably thought for about forty seconds about the relationship of biscuits to the Underground Railroad, and for forty minutes about measuring flour, mixing shortening and so on."[42]

And since, as Willingham puts it, "memory is the residue of thought", what students spend their time thinking about – in this case baking rather than history – really matters.[43]

It is this tendency to spend time on superficial or irrelevant activities (weighing, mixing, tidying up etc) that leads author and educator Gilbert Sewall to argue that supporters of active, project-based learning "have made a dangerous error. They have substituted ersatz activity and shallow content for the hard and serious work of the mind." [44]

42.   Willingham, D. (2009) *Why Don't Students Like School*. Jossey Bass; 1st edition
43.   Ibid
44.   Sewall, G.T. (2000) Lost in Action: Are time-consuming, trivializing activities displacing the cultivation of active minds? *American Educator* Summer Issue. [online] Available at: www.aft.org/periodical/american-educator/summer-2000/lost-action

As to what that serious work of the mind looks like, Sewall describes it thus:

"At the core, always, is serious content approached seriously. Knowledge builds on knowledge. Thirteen years of carefully sequenced content and jealously guarded classroom time allow students to build an enormous storehouse of knowledge and skills and the ability to use them. And since knowledge and success are the best breeding ground for interest to take root and expand, the more students know, the more they will want to know. Under the leadership of their teacher, students work to unearth meaning; to evaluate, interpret, compare, extend, and apply; to analyse their errors, present their findings, defend their solutions; to attend carefully to what others say; to get their thoughts down clearly on paper; to understand. This is not boring and it is not passive. This is real action learning. This is the mind at work."[45.]

This idea, that what matters is not the level of physical activity in the classroom but the level of cognitive activity in the student's mind, is picked up by Richard Meyer, professor of psychology at the University of California.[46.] He studied three different forms of discovery learning, used over a 30-year period, each based on Swiss psychologist Jean Piaget's constructivist theory of learning which held that people construct their own understanding and knowledge of the world through experiencing things and reflecting on those experiences. Meyer concludes that even those who believe that underlying theory has some merit (as he himself claims to do) should beware the trap of equating active learning with active teaching methods. To illustrate the point, Meyer presents a 2 x 2 matrix as below, in which the columns represent passive learning (low cognitive activity) and active learning (high cognitive activity), while the rows represent guided teaching methods (in which learners are not necessarily behaviourally active) and the pure discovery teaching methods (in which they are highly behaviourally active).

The "constructivist teaching fallacy" as Meyer calls it, is that the only way to achieve constructive learning is through active methods of teaching (the lower right quadrant). Whereas his contention is that: "A variety of instructional methods can lead to constructivist learning—including those in both the upper right and the lower right quadrants. Thus, a challenge facing educational researchers is to discover instructional methods that promote appropriate processing in learners rather than methods that promote hands-on activity or group discussion as ends in themselves."[47.]

45. Ibid.
46. Meyer, R. (2004) Should there be a three strikes rule against pure discovery learning? The Case for Guided Methods of Instruction. *American Psychologist* 59(1) pp.14-19
47. Ibid.

The risk of cognitive overload

The second argument against student-led, project-based learning – and one that remains relevant even when the project is rich in serious content and purposeful activity – is that there is simply too much going on for students to take it all in or, to use the technical term, that projects can all too easily result in "cognitive overload."

Cognitive load theory, described earlier this year by Professor Dylan Wiliam, one of Britain's most influential educationalists, as "the single most important thing for teachers to know", is so central to the case against complex, multi-disciplinary, cross-curricular projects or enquiries that it is worth setting out its basic points in detail.[48.]

Joe Sweller and Paul Chandler of the University of New South Wales provide the following description of the phenomenon:

> "A limited working memory makes it difficult to assimilate multiple elements of information simultaneously… As a consequence, a heavy cognitive load is imposed when dealing with material that has a high level of element interactivity. High levels of element interactivity and their associated cognitive loads may be caused both by the intrinsic nature of the material being learned and by the method of presentation. If the intrinsic element interactivity and consequent cognitive load are low, the extraneous cognitive load caused by instruction design may not be very important. In contrast, extraneous cognitive load is critical when dealing with intrinsically high element interactivity materials."[49.]

Or, in less precise but hopefully more accessible language: because our brains can only process so much new information at any one time, if the thing you are teaching is complex, teaching it in a complicated way significantly increases the risk that the student won't remember it. Which is why:

> "One aim of instructional design is to reduce extraneous cognitive load so that a greater percentage of the pool of working memory resources can be devoted to issues germane to learning rather than to issues extraneous to learning."[50.]

Those who argue for breaking subjects down to their smallest constituent parts and teaching them explicitly claim this doesn't just have the advantage of not overloading working memory, but also makes it easier for teachers, through a process of regular, highly specific formative assessment, to identify knowledge gaps and misunderstandings. This in turn allows them to move forward at the most efficient pace, stretching but not overwhelming their students and, crucially, never moving on until the last building block in the student's knowledge is securely in place.

48.   Wiliam, D. (2017) Twitter. [online] Twitter.com. Available at: twitter.com/dylanwiliam/status/824682504602943489?ref_src=twsrc%5Etfw&ref_url=https%3A%2F%2Fgregashman.wordpress.com%2F2017%2F01%2F27%2Fcognitive-load-theory-the-single-most-important-theory-for-teachers-to-know%2F [Accessed 12 Oct. 2017]

49.   Sweller, P. and Chandler, J. (1994) Why some material is harder to learn. *Cognition and Instruction* 12(3) pp.185-233

50.   Ibid.

Proponents of explicit instruction tend also to argue for lots of deliberate practice (although they won't get an argument on this from those, like Peter Hyman at School 21, who know how important it is to successful project-based learning). The value of deliberate practice – the process of practising particular skills under the close supervision of an expert – is often explained by reference to elite sports. If you want to become good at cricket, simply playing games of cricket is a highly inefficient way of improving your game; it involves too much time not playing at all while you wait to bat, and too few opportunities, even when you are on the field, to practise the sport's most important or most difficult skills like bowling, batting or catching. Far better to isolate those tasks and practise them through repetitive drills – bowling, batting or catching thousands of balls until it becomes automatic. 'Over-learn' each part, in other words, like we do with times tables or letter sounds.

All of this suggests that, if students aren't to waste time on easy tasks, or get distracted by irrelevant tasks, or become overwhelmed by multiple or complex tasks, they need to be skilfully guided through a meticulously planned and appropriately sequenced and paced project that is rich in content, with that content taught explicitly and practised deliberately if need be. What is more it should be structured to provide regular opportunities for reflection and feedback.

The research literature suggests that the less skilful the teacher, and the less carefully designed the project, the more likely it is students – particularly the most novice, or those who come to the project with the smallest store of intellectual and cultural capital – will struggle.[51] And with dynamic, activity-filled projects providing the confused student with easy hiding places, the risk is they end up, to use Gilbert Sewall's phrase, "lost in action," their disorientation obscured by a "whirlwind of doing and doing."[52]

This may be why a recent Education Endowment Foundation (EEF) funded randomised control trial, which sought to measure the impact of project-based learning on literacy and student engagement at Key Stage 3, found it produced no improvement in either, while harming the literacy levels of students eligible for Free School Meals (FSM).[53] In an attempt to explain this negative impact, the evaluation team hypothesise:

> "It is possible that the 'Learning through REAL Projects' intervention is not as accessible to FSM pupils as for other pupils. The autonomy provided by projects and the requirement for more independent self-directed study may require skills that are less developed by these pupils."

51. Andersen, I.G. and Andersen, S.C. (2015) Student-centred instruction and academic achievement: linking mechanisms of educational inequality to schools' instructional strategy. *British Journal of Sociology of Education* 38(4) pp.533-550; Menzies,, V., Hewitt, C., Kokotsaki, D., Collyer, C. and Wiggins, A. (2016) Project Based Learning Evaluation report and executive summary. [ebook] EEF. Available at: educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/EEF_Project_Report_Project_Based_Learning.pdf [Accessed 13 Oct. 2017]

52. Sewall, G.T. (2000) Lost in Action: Are time-consuming, trivializing activities displacing the cultivation of active minds? *American Educator* Summer Issue. [online] Available at: www.aft.org/periodical/american-educator/summer-2000/lost-action

53. Menzies, V., Hewitt, C., Kokotsaki, D., Collyer, C. and Wiggins, A. (2016) Project Based Learning Evaluation report and executive summary. [ebook] EEF. Available at: educationendowmentfoundation.org.uk/public/files/Projects/Evaluation_Reports/EEF_Project_Report_Project_Based_Learning.pdf [Accessed 13 Oct. 2017]

However, the evaluators repeatedly stress the need for caution in interpreting the findings of the trial due to significant problems within both the 'business-as-usual' control group of schools (all of which had expressed an interest in using project-based learning; some of which went ahead and introduced it anyway) and the treatment group (almost half of which dropped out during the trial). This extraordinary attrition rate is itself highly revealing, underlining the size of the commitment required to (re) organise your school to teach through projects.

The EEF's earlier literature review cites a number of studies that point to a range of positive benefits of project-based learning. Again, however, the authors urge caution, noting that:

> "Most of the reviewed studies did not involve random allocation of participants to control and experimental groups and, as a result, a causal link between project-based learning instruction and positive student outcomes cannot be established with certainty."

More interesting is what the literature tells us about how teachers and school leaders should approach project-based learning. Here, success is shown to "depend on a teacher's ability to effectively scaffold pupils' learning, motivate, support and guide them along the way to reduce their cognitive load,[54] and to enable them to make small successful steps and ultimately achieve 'cognitive growth just beyond their reach'.[55] Leaving scope for learner control of the learning process is crucial with teachers and pupils having to work together to reflect upon the purpose of the project, set clear and realistic goals, and make decisions regarding the pace, sequencing and content of learning.[56] The level of support that teachers get from the school's senior management and from other colleagues is of particular importance." [57]

An eye catching EEF recommendation, based on their reading of the literature, is that teachers should strike "a balance between didactic instruction and independent inquiry method work to ensure that pupils develop a certain level of knowledge and skills before being comfortably engaged in independent work" – a key concession to critics of discovery learning.[58]

When I put these points directly to Peter Hyman at School 21, one of the few schools that participated in the EEF's project-based learning trial that seems to have made an unqualified success of it, he had this to say:

> "Some of the ways in which some schools have used project-based learning have poisoned this area because they are about multi-disciplinary, mushy

54. Hmelo-Silver, C.E., Duncan, R.G. and Clark, C.A. (2007) Scaffolding and Achievement in Problem-Based and Inquiry Learning: A Response to Kirschner, Sweller and Clark (2006) *Educational Psychologist* 42(2) pp.99-107

55. Bell, S. (2010) Project-Based Learning for the 21st Century: Skills for the Future. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 83(2) pp.39-43

56. Helle, L., Tynjälä, P. and Olkinuora, E. (2006) Project-Based Learning in Post-Secondary Education – Theory, Practice and Rubber Sling Shots. *Higher Education* 51(2) pp.287-314

57. Lam, S. (2010) School support and teacher motivation to implement project-based learning. *Learning and Instruction* 20(6) pp.487-497

58. Ibid, pp.1

topics like 'time' in which every subject is shoehorned in, along with some only tangentially relevant activities – singing a song about time and so forth – and the whole thing quickly becomes a mess.

"Good PBL schools do interdisciplinary work which of course has a hugely academic and rich tradition – the best universities like UCL and MIT do a lot of this. In fact STEM is a good example.

"At School 21, the most subjects we ever put together in a single project is three, and the teachers involved see themselves as guardians of the disciplines they come from. And many of our teachers do more direct instruction and lectures with PBL – to ensure the knowledge is properly understood – than they did previously. PBL is a series of techniques rather than one method of teaching. And we do not promote skills over knowledge."[59.]

The centrality of the teacher to all pedagogical methods that seek to transfer a degree of ownership and control over the learning process to the student is further underlined by a 2006 academic review of a range of experimental studies comparing guided and non-guided approaches, which notes that students exposed to pure discovery methods combined with minimal feedback "often become lost and frustrated, their confusion leading to misconceptions." [60.]

In an echo of the EEF's project-based learning trial, a recent study into independent learning that focused on 56,000 students in 825 Danish schools, found that: "A student-centred instructional strategy has a negative impact on academic achievement in general, and for students with low parental education in particular."[61.]

Professor Richard Meyer, whose warnings about mistaking active classrooms for active learning we encountered earlier, concludes that:

"There is sufficient research evidence to make any reasonable person sceptical about the benefits of discovery learning as a preferred instructional method… guided discovery was more effective than pure discovery in helping students learn and transfer. Overall, the constructivist view of learning may be best supported by methods of instruction that involve cognitive activity rather than behavioural activity, instructional guidance rather than pure discovery, and curricular focus rather than unstructured exploration."[62.]

Of all the schools I visited, it is perhaps Bealings Primary School in Suffolk that is most exposed to this risk, employing, as it does, the 'Mantle of the Expert' role-play method, the purest form of child-led, discovery learning I witnessed. The fact that it is sitting on five consecutive Ofsted 'Oustanding' judgements and regularly posts academic results

59.   In correspondence with the author (June, 2017)

60.   Kirschner, P., Sweller, J. and Clark, R.E. (2006) Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential and Inquiry-Based Teaching. Educational Psychologist, 41(2) pp.75-86.

61.   Andersen, I.G. and Andersen, S.C. (2015) Student-centred instruction and academic achievement: linking mechanisms of educational inequality to schools' instructional strategy. British Journal of Sociology of Education, 38(4) pp.533-550.

62.   Meyer, R. (2004) Should there be a three strikes rule against pure discovery learning? The Case for Guided Methods of Instruction. *American Psychologist* 59(1) pp.14-19.

that place it in the top 10 percent of schools in the country speaks volumes about the quality of the school's leadership and teaching, but should also give critics of their methods, and their whole school model, pause for thought. That said, Bealings is, even compared to the other mission-oriented schools I visited, highly untypical. It is a tiny rural primary school (with just 104 pupils on roll), with very low levels of deprivation (just four pupils are eligible for free school meals) and a self-selecting community of parents who are positively attracted by the school's ethos and philosophy – all of which are likely to be non-trivial factors in its success.

Whether the same model and methods, applied by less effective teachers in a more deprived area would enjoy the same success is moot. Certainly, the research literature suggests that if the acquisition of academic knowledge by a novice student is the goal, and the average teacher in the average school the means of delivery, direct and explicit instruction is the least risky approach.

The most important word in that last paragraph is "novice", however, since the appropriateness of different teaching and learning strategies depends on where students are on the novice to expert continuum. Why? Because novices and experts think and learn in very different ways, ways that make them more or less dependent on their limited working memories and therefore differentially vulnerable to the risk of cognitive overload.

David Didau, co-author of *What every teacher needs to know about psychology*, explains these differences by reference to two hallmarks of expertise: the automatisation of foundational procedures, and the ability to see "deep" structure in domains of expertise.[63.]

He explains automatisation by describing the process of learning to drive. If you think back to your first lesson, he suggests, you'll remember how concentrating on your feet, hands, mirrors and the environment outside the car required enormous mental effort; how you had to pay attention to everything. If you then think back to what it was like in the weeks after you passed your test, you'll remember how changing gears, glancing in your mirrors and indicating had become automatised, leaving your working memory free to concentrate on the traffic and to make predictions about what may or may not happen around you in the coming seconds.

As an illustration of how experts can see deep structure, Didau describes how, when he first watched the film Reservoir Dogs, his immediate thought was: "Oh, it's a Senecan tragedy!" How was he able to look beyond all the action and dialogue to spot this underlying structure? Because he took classical studies at A-level and had read a couple of the Roman dramatist Seneca's plays; then, as part of his English literature degree, had been shown Seneca's influence on *Hamlet*, as well as writing an essay comparing Thomas Kyd's *The Spanish Tragedy* and *Titus Andronicus*. This made him a relative expert in that domain, which meant he could see things that most other people in the cinema that day couldn't see.

63.   Didau, D. (2017) *A Novice Expert Model of Learning.* [online] Available at: http://www.learningspy.co.uk/learning/novice-expert-model-learning/

These two examples help tease out some of the 11 key differences in the way experts and novices think and learn, set out in the table below.

Novice	Expert
Little relevant background knowledge.	Lots of relevant background knowledge.
Relies on working memory.	Relies on long-term memory.
Lacks effective mental representations of successful performance.	Has a clear mental representation of successful performance within a domain.
Has not automatised necessary procedural knowledge.	Necessary procedural knowledge has been automatised.
Only has explicit knowledge.	Possesses huge reserves of tacit knowledge.
Problem solving requires following clear steps.	Problem solving is intuitive.
Sees superficial details.	Sees underlying structures.
Learns little when exposed to new information.	Learns a lot when exposed to information about which they are already knowledgeable.
Learns best through explicit instruction and worked examples.	Learns best through discovery approaches.
Is more likely to experience cognitive overload as attention is swamped by new information.	Is unlikely to experience cognitive overload as attention is buttressed by memorised "chunks" of knowledge.
Struggles to transfer principles to new contents.	Is able to transfer principles between related domains.

Why do these differences matter? Because they have significant implications for the way in which facts, concepts and skills of varying levels of complexity and challenge should be taught to students at different points on the novice to expert continuum.

Over the years, educationalists have created multiple frameworks for classifying the different skills a student must acquire on route to becoming an expert, with Bloom's taxonomy (created in 1956 by educational psychologist Benjamin Bloom) the most famous:[64]

As Didau's co-author Nick Rose explains, the problem with taxonomies of this sort relates not to their properties but to the way they are

64. Bloom, B. S. (1956) Taxonomy of Educational Objectives. Vol. 1: Cognitive Domain. New York: McKay

used – the way they influence teachers' practice.[65.] Because they tend to be presented as hierarchies, with highly-valued, advanced thinking skills at the top, and less-valued basic skills at the bottom; because the skills at the top tend to be creative and relevant to the real world, whereas those at the bottom are often deemed mundane or relevant only to the classroom; because examiners award more marks to students the further up the hierarchy they go; and because teachers often fall victim to 'the curse of knowledge' (the phenomenon whereby experts with a lot of knowledge find it impossible to remember what it is like to lack that knowledge), too little time gets spent on the basics.
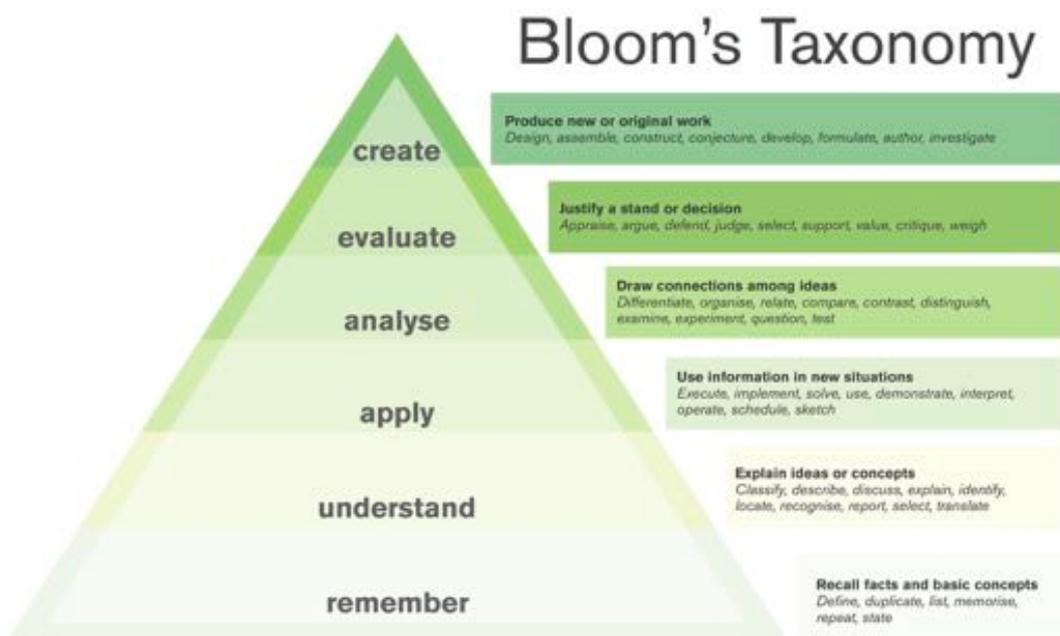
But neither Rose nor Didau would argue that, as students progress, teaching methods don't need to evolve. They clearly do. No one would survive long at university if they hadn't developed the ability to work independently and undertake their own research. The question – and the issue of contention within the school system – is when to shift towards student-led methods of learning.

Education Professor John Hattie and his research associate Gregory Donoghue have recently developed a model of learning that seeks to answer that question; to identify which teaching strategies are most appropriate at each stage of the novice to expert journey.[66.]

The model sets out three stages – surface, deep and transfer – with the first two of these divided into acquiring and consolidating. It then lists three inputs and outputs, listed as "skill", "will" and "thrill" (skill refers to the student's prior or subsequent attainment, will to their dispositions to learning and thrill to their motivations) each of which should be strengthened by successful learning.

65. In conversation with the author, March 2017
66. Hattie, J. and Donoghue, G. (2016) Learning strategies: a synthesis and conceptual model. *Science of Learning 1*. Article number: 16013

They argue that different learning strategies are differentially effective depending on whether the student is in the surface, deep or transfer phase, and on whether they are acquiring or consolidating their understanding within that phase (with the student's awareness of success criteria and the nature of the learning environment two other key determinants of success).

A Model of Learning
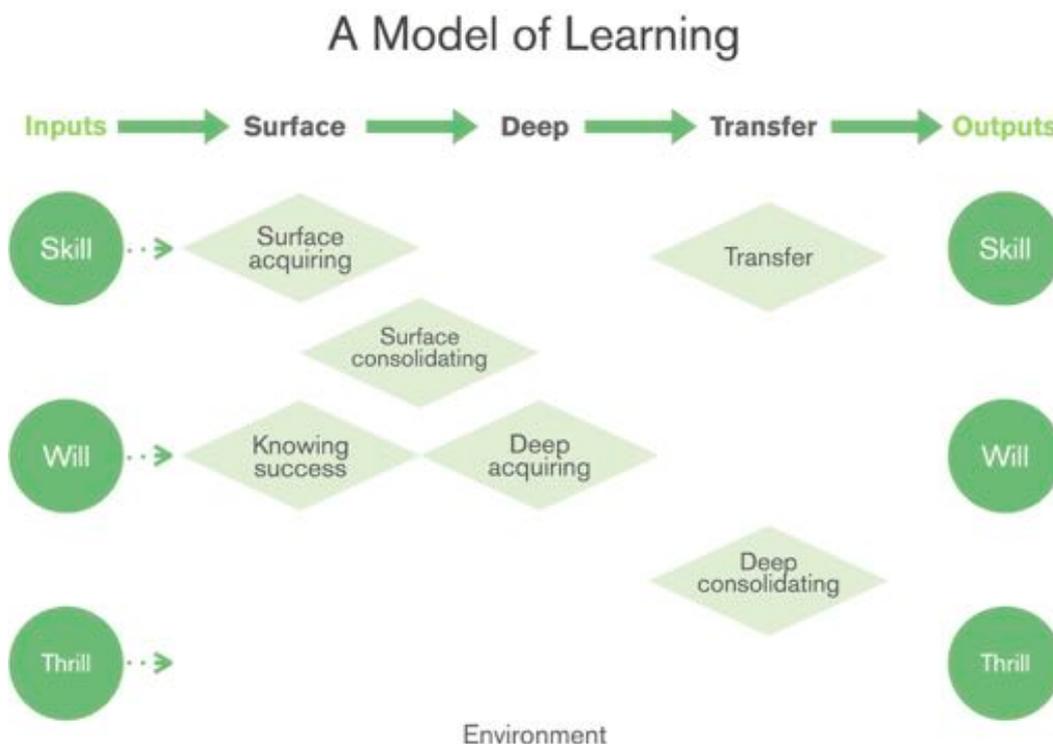
The strategies they suggest teachers deploy at each stage are selected not just on the basis of their stage-appropriateness, but by the amount of promise they showed in Hattie's previous synthesis of meta-analyses.

A reading of the strategies they propose for each stage reveals a clear trend: the gradual transfer of control over the learning process from teacher to student, accompanied, necessarily, by an increased emphasis on the importance of the student reflecting on how that learning is taking place. This conclusion – that metacognition is of central importance to successful independent learning – is the key finding not only of Hattie's much-cited synthesis of over 800 meta-analyses of the relative effectiveness of different educational innovations,[67.] but the Education Endowment Foundation's summary of the evidence into the relative cost-effectiveness of different school-based programmes and interventions.[68.]

The risk for those schools that employ student-led or discovery methods of learning (particularly when used in the context of complex, cross-curricular or multi-disciplinary enquiries and projects) is that the transfer of control over the learning process from teacher to student happens too early.

To underline the severity of this risk, it is worth returning to the Institute of Education's Professor Dylan Wiliam to sum up what he thinks

---

67.   Hattie, J. (2008) *Visible learning* Routledge
68.   Education Endowment Foundation. Teaching and learning toolkit

is the significance of cognitive load theory for those who employ student-led, project-based learning methods:

"John Sweller [the world's leading authority on cognitive load theory] is only controversial if you don't want to take any account of the evidence about how human brains actually work… Cognitive science is now showing how this focus on skills rather than content has been unhelpful; how the focus on authentic activities, on project-based learning, has been unhelpful. Not because project-based learning is a bad idea. But because it has too often focused on the project rather than the learning. If we can get learning happening in projects, I'm all for it, but the difficulty is that, when for example we see authentic work in science – students doing lab work in science – if the students lack the content knowledge to make sense of what they're seeing, they're not learning anything. And the most important contribution John Sweller has made is to point out that one of the ways in which learning can fail to happen when you might expect it to happen is because students become overloaded; the cognitive load is too great. And this is based on some incredibly solid science. There is no serious psychologist who disputes the idea that one of the most powerful models for thinking about the way our brains work is [to think about] short term memory and long-term memory. And short term memory is limited in capacity and duration, and can't really be increased very much. And therefore the only way to make students smarter is to increase the contents of long-term memory, and while it may be controversial, I have no doubt that Sweller is fundamentally correct."[69]

The knowledge / skills misconception

The third main challenge to those schools whose stated priority is the cultivation of skills, competencies or capabilities, rather than the transmission of knowledge, was put to me by Hywel Jones, the head of the West London Free School. Jones' view is that skills, particularly highly prized advanced skills like complex problem solving or critical thinking, cannot be taught outside of, let alone applied with equal effect across, particular knowledge domains.[70]

A clear but necessarily lengthy explanation of the objection to the idea of skills being taught in the abstract, as somehow separate from knowledge, comes from David Didau who writes:

"Philosophers have been trying to work out what knowledge is for millennia. When Greece was still ancient, Aristotle broke it into three components… Episteme, or propositional knowledge is 'what' we know, whereas techne or procedural knowledge, is 'know how,' and is basically synonymous with 'skill'. Phronesis is perhaps best thought of as tacit knowledge and is made up of things we're unable to articulate and don't necessarily know we know…

Thinking depends on knowledge… You can't think about something you don't know. What we think about are concepts, ideas, experiences and

69. Wiliam, D. (2017) *Growth mindset, cognitive load and the role of research in your classroom*, in conversation on the TES podcast. Available at: www.tes.com/news/school-news/breaking-views/listen-growth-mindset-cognitive-load-and-role-research-your

70. In conversation with the author (March 2017)

facts... We can think about the capital of Chad or the length of the Nile. We can think about our favourite colour or what we'd like for our birthday. We can think about anything we know at least something about, but this can be a shallow, unfulfilling experience. The more things we know, the more detail we possess, the more links and connections we can make. Seeing these links is insight; making these connections is creative. What you know is like intellectual Velcro; new stuff sticks to it, so the more you know, the more you learn.

But all this propositional knowledge is just the tip of an unimaginably enormous iceberg. Although you probably can't explain it, you know how to balance. You know how to recognise thousands of different human faces. You might not know you know this, but if you're reading this you know the relationships between the 44 phonemes and over 170 graphemes that make up the English alphabetic code. These aren't things most people think 'about', but we use them to think 'with' all the time."[71.]

This type of knowledge, Didau explains, is tacit knowledge. And the fact that most of our knowledge is tacit means we are unaware of all the things that are of crucial importance to our ability to think:

"This results in absurdities like: 'knowledge isn't all that important because you can always look up whatever you need to know on the internet'... Persuasive as these arguments can seem, they ignore the fact that a lot of tacit, procedural knowledge – stuff we're not consciously aware of thinking 'about' – is what we think 'with'... Anything we are dependent on looking up we are unable to think with. 'Thinking with' and 'thinking about' are different ways of handling knowledge but both depend on having the stuff in our heads. If you only know where to look something up, that's the extent of your thinking... Only being able to look things up is an impoverishing experience. Knowledge is only knowledge if it lives inside us."[72.]

E D Hirsch, makes a similar point when he says:

"There is a consensus in cognitive psychology that it takes knowledge to gain knowledge. Those who repudiate a fact-filled curriculum on the grounds that kids can always look things up miss the paradox that de-emphasizing factual knowledge actually disables children from looking things up effectively. To stress process at the expense of factual knowledge actually hinders children from learning to learn. Yes, the internet has placed a wealth of information at our fingertips. But to be able to use that information – to absorb it, to add it to our knowledge – we must already possess a storehouse of knowledge. That is the paradox disclosed by cognitive research."[73.]

71. Didau, D. (2014) Practical differentiation: high expectations and the art of making mistakes, *The Learning Spy* [blog]. Available at: www.learningspy.co.uk/featured/differentiation-really-matters/
72. Ibid.
73. Hirsch, E. D. (2000) You can always look it up… or can you? *American Educator* Vol. 24, No. 1. Available at: citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.152.9549&rep=rep1&type=pdf

Which is why it is argued that the idea of skills, separate from knowledge, simply makes no sense. Because, as Didau puts it:

> "All skills require knowledge, and thinking, in whatever form it takes, is procedural knowledge. There's no such thing as a generic ability to be analytical or creative; you can only analyse some thing or be creative in a particular field. To understand this we need to deconstruct the idea of skills. Instead of seeing skills as somehow separate from knowledge it's more useful to view knowledge and its application as inseparably intertwined and mutually interdependent. It might be better to abandon the term 'skills' altogether and replace it with the more neutral and useful term 'expertise'."[74.]

If the opponents of skill, capability or competency focused education are right – if skills don't exist in the abstract, are not easily transferred between knowledge domains and cannot be taught directly (because you can't teach or learn critical thinking without having something to think critically about, or problem solving without a problem to solve) – it is hard to see what harm can result from this misconception. After all, the essence of Didau's argument against teaching skills directly, is that you can't. It is therefore, by his own logic, a theory that is incapable of being operationalised.

But just because something cannot be done doesn't stop people trying to do it. To understand why, we need to return to root of the problem – assessment. As we have seen, in education systems characterised by high-stakes accountability, what gets measured is what gets done. And what most high-stakes summative assessments seek to measure is not whether students can remember facts, but whether they can analyse those facts and put them to use – higher order 'skills' in other words. Which has predictable consequences for the way teachers teach.
Here is Daisy Christodoulou again:

> "'National curriculum levels', the 'assessing pupil progress' grids, the 'interim frameworks' and various 'level ladders' are all based on the assumption that there were generic skills of analysis, problem-solving, inference, mathematical awareness and scientific thinking etc that could be taught and improved on. In these systems, all the feedback pupils get is generic. Teachers were encouraged to use the language of the level descriptors to give feedback, meaning that pupils got abstract and generic comments like: 'you need to develop explanation of inferred meanings drawing on evidence across the text' or 'you need to identify more features of the writer's use of language'.
>
> Unfortunately, we know that skill is not something that can be taught in the abstract. We all know people who are good readers, but their ability to read and infer is not an abstract skill: it is dependent on knowledge of vocabulary and background information about the text.
>
> What this means is that whilst statements like 'you need to identify more features of the writer's use of language' might be an accurate

74. Didau, D. (2017) Everyone values critical thinking, don't they? *The Learning Spy*. Available at: www.learningspy.co.uk/featured/everyone-values-critical-thinking-dont/

description of a pupil's performance, these statements are not actually going to help them improve. What if the pupil didn't know any features to begin with? What if the features they knew weren't present in this text?

Generic feedback is descriptive, not analytic. It's accurate, but it isn't helpful. It tells pupils how they are doing, but it does not tell them how to get better. For that, they need something much more specific and curriculum-linked. In fact, in order to give pupils more helpful feedback, they need to do more helpful, specific and diagnostic tasks. If you try to teach generic skills, and only give generic feedback, you will end up always having to use assessments that have been designed for summative purposes. That is, you will end up over-testing and teaching to the test."[75]

4.2.2 The limits of science

That England's mission-oriented educators, despite their differences, are engaged in such an involved intellectual debate about what cognitive science tells us about how children learn, and about what that means for the way adults should teach, is in itself a cause for celebration. These conversations at education conferences and on social media, have hugely increased the rigour of our national debate, making it unusually research-informed and evidence-based by international standards. This in turn has had the significant benefit of busting the neuro-myths and educational fads to which teachers, whose central task is to affect an invisible change inside children's heads, are particularly vulnerable. The latest example of many being the debunking of the idea of 'learning styles' which promised to optimise education by tailoring materials to match the individual's preferred mode of sensory information processing.[76]

Despite its enormous contribution, however, we need to understand science's limitations – limitations of which scientists themselves are acutely aware. This is cognitive psychologist Daniel Willingham making just that point:

> "I think of cognitive psychology as the latest set of assumptions and body of theory directed towards a scientific approach to understanding thought…We are at a very early stage in using this science and we have to be careful about its use, especially bearing in mind how important a certain degree of scepticism is in our approach to 'truth'."[77]

Continuing, Willingham explains why, like the bureaucratic instinct to measure educational outcomes, science can only take us so far towards the essence of education:

75. Christodoulou, D. (2017) Making Good Progress? The Future of Assessment for Learning. *The Wing to Heaven* [blog] 3 January. Available at: thewingtoheaven.wordpress.com/category/assessment/

76. Hood, B. et al. (2017) No evidence to back idea of learning styles, *The Guardian* Available at: www.theguardian.com/education/2017/mar/12/no-evidence-to-back-idea-of-learning-styles

77. In conversation with Robinson, M. (2013) *Trivium 21c: preparing you people for the future with lessons from the past*. Independent Thinking Press

"In general, the pre-requisites for the application of the scientific model are that it needs to be something from the natural world…And it needs to be something that you can measure in some way. You can't just execute scientific method in the absence of measurement…So in terms of education, lots of things fall outside the view of science…Education is goal driven. In science you seek to describe the world as it is; in education and other applied fields you want to change the world. You are trying to make the world more like you think it ought to be…You're trying to change children, and you've got a goal of what you want them to be like.

The definition of that, the specification of that goal, is completely outside the purview of science. It's a matter of one's values: what you think children should learn at school, what you think they should end up like when they're done with school. Once you've defined the goals, science might be able to help you achieve them."[78.]

The lesson? Just as the leader of a mission-oriented school should obsess about performance but remain alert to the dangers of performativity, so she should seek to learn the lessons of science while avoiding the trap of scientism.

78. Ibid.

4.3 Challenges for schools that seek to teach knowledge through teacher-led, didactic instruction

4.3.1 The philosophical challenge to teacher-led, didactic instruction

If the scientific case against trying to develop skills, capabilities and competencies through student-led, project-based learning has put its proponents on the back foot in recent times, the force of their philosophical objection to traditional, didactic teaching is undiminished. As Willingham reminds us, this matters, for ultimately: "Education is goal driven… and the specification of that goal is a matter of one's values."

The original, values-based, philosophical objection to traditional, teacher-led education was perhaps best summed up by liberal reformer John Dewey:

> "The very situation [of traditional education] forbids much active participation by pupils in the development of what is taught. Theirs is to do – and learn… Learning here means acquisition of what already is incorporated in books and in the heads of the elders. Moreover, that which is taught… is taught as a finished product, with little regard either to the ways in which it was originally built up or to changes that will surely occur in the future. It is to a large extent the cultural product of societies that assumed the future would be much like the past, and yet it is used as educational food in a society where change is the rule, not the exception."[79]

It is a view repeated, in even starker language, by Marxist philosopher Paulo Freire:

> "Narration (with the teacher as narrator) leads the students to memorize mechanically the narrated account. Worse yet, it turns them into 'containers,' into 'receptacles' to be 'filled' by the teachers. The more completely she fills the receptacles, the better a teacher she is. The more meekly the receptacles permit themselves to be filled, the better students they are. Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiques and makes deposits which the students patiently receive, memorize, and repeat. This is the 'banking' concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits… in the last analysis, it is the people themselves who are filed away through the lack of creativity, transformation, and knowledge."[80]

79. Dewey, J. (1938) *Experience and Education*. New York: Collier Books
80. Freire, P. (1968) *Pedagogy of the oppressed*. New York: Herder and Herder

Listen to Peter Hyman's concerns about contemporary schooling and you will hear echoes of Dewey and Freire:

> "Regimentation and compliance is the way of getting people through a system they don't enjoy. So, more schools opt for the silent treatment. Silence in corridors, silent classrooms, stricter rules. Detentions are regular and relentless for those who transgress. The message is not lost on young people: you are thugs who need civilising; we can't trust you to talk; we don't want to hear from you; do as you are told.
>
> These authoritarian regimes deliver for a time but often leave young people floundering when they move to university or work, where the straitjacket is removed. Authoritarian regimes also lead to unthinking young people, afraid to question authority, even when that authority is heading off the rails."[81]

That last sentence is worth reading again. For here Hyman directly addresses the challenge set out at the beginning of this report; that of educating for freedom at a time when our liberal democratic values, and the laws, institutions, attitudes and behaviours that embody and protect those values, are threatened, whether through ignorance, frustration or cold calculation, by our own elected representatives.

The limits of grammar (or the importance of 'dialectic')

To understand why teaching for freedom is a particular challenge for those who put their faith in more traditional teaching methods, we could do worse than use the historical idea of the Trivium as our frame. The three arts of the Trivium – 'grammar', 'dialectic' and 'rhetoric' – can be traced back to the ideas of the ancient Greeks, but were given their collective title in medieval times to describe the knowledge, and the reasoning and communication skills, a student was deemed to need if he was to go on to study the Quadrivium: arithmetic, geometry, music and astronomy. I cannot, in the space I have here, do justice to the full power of the Trivium as an organising idea on which to build a contemporary liberal arts education, but can enthusiastically point readers in the direction of *Trivium 21c: preparing young people for the future with lessons from the past* by Martin Robinson on whose work I will now lean.[82]

So what are these three arts? Well grammar, to oversimplify, is knowledge – the facts of the matter. Dialectic is analysis and questioning – the process of holding a fact or an idea up to the light and checking for its flaws. And rhetoric is communicating – sharing what you know, think or feel through the written word or speech, a presentation, product or performance.

Grammar, or knowledge as we would call it today, is where the traditionalist feels most at home. Not just because "knowledge is power" – a phrase that, in today's debate, captures the idea of cultural literacy as an instrument of social mobility, the means by which those born into poverty

81.   Hyman, P. (2017) It's time for a real revolution in Britain's schools. *The Observer* Available at: www.theguardian.com/education/2017/feb/26/revolution-in-uk-schools [Accessed 12 Oct. 2017]
82.   Op cit

can take control of their own destinies. And not just because "it takes knowledge to gain knowledge" – the key scientific insight that scientists like Dan Willingham and educators like E D Hirsch believe should sit at the centre of the debate about how and what to teach. No, the traditionalist also believes in a knowledge-rich education because it speaks to the conservative values in which traditionalism is intimately bound up – respect and deference, history and conservation, order and stability, rules and obedience. For, as Robinson reminds us, knowledge, and the process of passing it down from one generation to the next, is inescapably about power – the power to decide what gets taught and what gets taught as truth. And with the government determining the content of the national curriculum – and the highly contested history curriculum in particular – this is as much about the power of the ruling class over society as the power of the teacher over a child. Which is why, when a student demands to know "Why are you teaching me this?", "Whose knowledge?", "Whose truth?" she is challenging authority, challenging tradition, challenging the past. And by doing so, she is asserting her right to own the present and build her own future – the progressive impulse in its purest form.

Dialectic, with its uncertainty and doubt, instability and flux, challenge and confrontation, is where conservatives and traditionalists feel least comfortable. For this is where the subversives and contrarians join the conversation; where the cracks in our shared knowledge are prised open and its outer limits tested.

Robinson divides dialectic into three: 'logic', including mathematical and scientific thinking; 'dialectic', understood as argument, debate and dialogue; and 'logos', "The teleological pursuit of an end that might not be fully understood – the mystery of it all."

As an illustration of how the first of these – logic and scientific method – can challenge tradition and grammar, Robinson quotes evolutionary biologist Richard Dawkins who, in an open letter to his daughter Juliet, wrote:

> "Next time somebody tells you something that sounds important, think to yourself, 'Is this the kind of thing that people only believe because of tradition, authority or revelation?' And next time somebody tells you that something is true, why not say to them, 'What kind of evidence is there for that?'" (Dawkins would later explain: "I was trying to tell her how to think about certain things, not what to think, but how to think)."[83]

To capture the essence of the second, dialectic – the art of disagreement and debate – he turns, appropriately, to that great contrarian Christopher Hitchens who explained: "When there is a basic grasp of narration and evolution and a corresponding grasp of differing views of the same story… we have the practice of teaching by dialectics."[84]

Explaining the third, logos, Robinson writes:

> "Logos emphasizes a higher level of knowledge, skills and experience. In other words, wisdom that has the capability to shape us, to make us

83. Ibid.
84. Ibid.

who we are, or who we are capable of being… It is the essence of our character… [which] paradoxically, is only accessible through a distinctive attitude to work, craft, and the desire to create something or do something of importance in the physical world but with 'beauty' or 'truth' as a transcendent aim. This is a journey towards deep understanding, a depth that gets to the essence of whatever form or domain in which we work. But this craft is not just about involvement with doing or making; it is about the essence of being, of presence, of being with purpose."[85]

As to what these ideas and ideals have to do with school, he explains:

"The art of dialectic therefore covers a very wide range of important activities in teaching and learning. In the context of whatever they are studying, students are taught the specific grammar that gives them structure and knowledge. This is taught in a way that also opens up the possibility of criticism, which in turn opens up the possibility for dialectic. Students should become well versed in being able to analyse and challenge, whether it be through logic, scientific method, or debate and discussion. Controversies should be welcomed and addressed. In classrooms, we should see the skills of deduction, induction, abduction, analysis, criticism, debate, argument, challenge and dialogue. Added to this, is the opportunity offered through logos: students should have quality time to develop their own enthusiasms and… whatever they decide to pursue, ways need to be found to ensure activities like these are recognised as being more than mere hobbies at the fringes of the curriculum."[86]

Michaela – like the 'Uncommon' and 'KIPP' charter schools in the US and some of the highest performing academies in England – is achieving a level of academic success many people didn't think possible until recently and is transforming its students' life chances as a result. But they do not teach through dialogue, still less through dialectics. With their tightly run lessons and silent corridors, Michaela is all about knowledge and rules – the very essence of grammar."

Contrast that with the emphasis Peter Hyman from School 21 puts on dialectic when he explains why he would be horrified if his school was to fall silent:

"We need a noisy education not a silent one. A noisy education is one where we elevate speaking to the same status as reading and writing. Where we allow young people to find their voice and help them grow in confidence and articulacy. It is a place of curiosity and questioning, debate and depth of understanding. The dialogic classroom is one in which talk aids thinking and understanding; through Socratic seminars and exploratory talk, children of a young age learn to wrestle with moral issues, explore difficult concepts and hone their arguments."[87]

85. Ibid.
86. Ibid.
87. Ibid.

The risk for traditionalists is that, in their determination to transmit knowledge, to firmly establish the grammar of a subject – they end up engaging in monologic, rather than dialogic, discussions which, as Carl Hendrick, Head of Learning and Research at Wellington College, puts it: "privileges the superficiality of certainty over the irresolution of ambiguity", despite the fact that "it is precisely within that liminal space of uncertainty that some of the most productive and fruitful dialogue can often take place." Continuing, he explains:

> "Monologic refers to the kind of interaction that is essentially one-way traffic, characterised by very fixed positions of authority, and sometimes closed in nature, whereas dialogic refers to an exchange that embraces difference, celebrates the voice of the other, and seeks to open up meaning rather than limit it."[88.]

Hendrick is at pains to point out that a dialogic classroom is not one in which knowledge is de-emphasised ("one crucial aspect of the contemporary dialogic classroom that is often neglected is the role of knowledge") nor one in which teachers should be discouraged from talking ("a monologic dynamic, where either the teacher is didactically speaking to students or where the students themselves are engaged in solitary thought, is a key element in the spirit of dialogism, but with one important caveat: it must then be appropriated into a dialogic mode of knowledge construction"). As Exeter University's Professor of Education Rupert Wegerif explains, monological thinking – working alone for long periods to develop a deep understanding of a knowledge domain – is:

> "tremendously useful for the quality of the larger dialogue. But it is useful not for finding an ultimate theory of everything that all others will have to accept. It is useful for fashioning more insightful and valuable contributions to the ongoing dialogue of humanity."[89.]

To locate the discussion in the context of the classroom, Hendrick provides two examples of a teacher-student exchange – a "finalised" version and a "dialogic" one. The finalised version might run like this:

Teacher: "What does the red in this poem symbolise?"
Pupil: "Blood."
Teacher: "Correct."

The dialogic version, by contrast, might look more like this:

Teacher: "What could the red in this poem mean?"
Pupil: "Could it symbolise blood?"
Teacher: "Whose blood?"
Pupil: "Could it be the blood of [the central character]?"
Teacher: "Possibly, or could it be a political statement?"
Pupil: "Was the author politically motivated?"
Teacher: "Well, can you find any evidence from the text that might support that view?"

88. Hendrick, C. (2016) Dialogue and Dialogic: The Trivium and Bakhtin. In M. Robinson (2016) *The Trivium in Practice* Independent Thinking Press
89. Wegerif, R. (2012) *Dialogic: Education for the Internet Age*. Routledge.

Clearly, dialogic teaching, if it is to be done properly, takes time. Which raises an interesting question about the pace at which children and young people should be educated, and about whether schools like Michaela, with their fast-paced model of instruction, can ever truly teach the Trivium.[90.]

This question of pace is one that is addressed by Mike Grenier, a house master at Eton College who co-founded the Slow Education movement in the UK, in a contribution to *Trivium in practice*, a follow up to Martin Robinson's *Trivium 21c*. Here, he describes the moment the idea of a "slow" education first came to him:

> "It was after a particularly enjoyable dinner at an Italian restaurant aptly called L'Anima ("the soul") that the idea came to me of finding out if there was a parallel of the Slow Food movement in the world of education…
> Slow food combines a love of good produce, careful preparation of food, and the enjoyment that comes from the social act of sharing and consuming food. In many ways this echoes the trivium: knowing what to cook and how to cook it represents a fusion of grammar and logic, and the performance or rhetoric of presentation and consumption transforms nutrition into art. I researched the concept online and found an article about Slow Education proposed by Maurice Holt, Emeritus Professor of Education at the University of Colorado… [in which] he made the connection between the production-line methods and poor end-product of fast food and much of what passed for modern schooling. This echoed my own experiences in the classroom. The arrival of another set of examinations (AS-Levels) in the lower sixth at the turn of the millennium, combined with the modular nature of A-level and GCSE examinations, had turned teaching in secondary schools into something that resembled an industrialised process. Teachers became obsessed with marking schemes and assessment objectives. Exam boards came around to schools with tempting INSET sessions to give you the 'inside track' on how to get the best out of your students, and students (as well as parents, senior leadership teams and government ministers) became dangerously fixated on performance over process."[91.]

The answer, according to Holt and Grenier, is to slow things down, to give students the time and space to reflect and argue, to explore and discover, to challenge and question. At a time when the UK's educational performance has been flat lining and when Singapore, Shanghai and other educational 'super powers' have been climbing the Programme for International Student Assessment (PISA) league tables, it might, Grenier acknowledges, seem strange to argue for going slower. But to him, pacing a student's education is analogous to driving a car, something that involves the use not just of the accelerator, but the break and the clutch:

> "Each pedal has its own role and, although acceleration is sometimes the best way to make safe progress, at certain times teachers and students need

90. Robinson, M. (2013) T*rivium 21c: preparing you people for the future with lessons from the past*. Independent Thinking Press

91. Grenier, M. (2016) Eton, Slow Education and the Trivium. In: M. Robinson, ed., *Trivium in Practice*. Independent Thinking Press, pp.77-104

the brake to be pressed lightly, or for there to be a change of gear, in order to ensure difficult inclines are surmounted. Slowing down in order to learn safely – and indeed to see clearly what is ahead – strikes me as a crucial part of learning."[92.]

Thus slow education is about making space and finding time to learn and overlearn, to practice and repeat, to delve deeper or to digress, to try, fail and try again, and throughout, to pause, consider, evaluate and reflect. It is, in other words, about deep learning at each stage of the Trivium to avoid the dangers of superficial knowledge, false logic and empty rhetoric.

To summarise then. Dialectic can be about exposing the irrational or the un-evidenced through logic and scientific reasoning – the weapons deployed to such devastating effect by Richard Dawkins. It can be about exposing charlatanism or hypocrisy through challenge and debate, as Christopher Hitchens spent a lifetime doing with such obvious relish. And it can be about dialogue and dualism – the process of questioning described by Carl Hendrick that allows both teacher and student to create meaning without ever quite arriving at a fixed conclusion. But it can also be about logos – what Martin Robinson describes as a state of "being with purpose" – that a student can achieve when given the opportunity and encouragement to discover and pursue their own passions.[93.]

It was this aim – of creating sufficient flex within the curriculum to allow different students with different interests and aptitudes to find their particular passions – that led Bedales to abandon the standard programme of nine or 10 GCSEs offered in most schools. Today, Bedales students are compelled to take just five GCSEs or IGCSEs in the core subjects of English language, maths, a modern foreign language and science (double or triple award). Then there are two compulsory but non-examined subjects – sport and what they call "block" (which includes careers advice, citizenship, personal and economic wellbeing, sex education and mental health). But beyond that, students can choose several from a long list of courses known as BACs (Bedales Assessed Courses), the school's own bespoke qualification that is internally assessed, externally moderated, and, due to its proven rigour, recognised and accepted for admissions purposes by the country's most prestigious universities. The list of BACs available includes Ancient Civilisations, Art, Classical Greek, Classical Music, Dance, Design (Product Design or Fashion), English Literature, Geography, Global Awareness, History, Outdoor Work, PRE (Philosophy, Religion and Ethics) and Theatre & Drama. When choosing their options, students are encouraged to go for breadth, ideally with some "hand work" alongside the academic "head work."

As I toured the school's campus last December with Keith Budge, Bedales' headmaster, we came across a student called Jack heading down the path towards us. When Keith asked him what he was up to, I was fully expecting the standard "nothing Sir" that has served schoolboys so well down the years. But instead of studied insouciance, what we got was an animated and detailed explanation (addressed, of course, to "Keith"

92. Ibid.
93. Ibid.

rather than "Sir") of the traditional craft of hedge laying that he had been learning that morning. As I stood there, listening to this highly energised young man talking without a hint of self-consciousness about his newly acquired skill, while bending, splicing and tying an imaginary sapling for my benefit, I realised what this was: logos. Like the 'Zen' that author Robert Pirsig talks about achieving through the 'art' of motorcycle maintenance, Jack had discovered the deep satisfaction – that state of "being with purpose" – that can be found in hard, high-quality 'hand work'.[94]

> "He's a highly-academic Oxbridge-bound student" Keith explained as we continued our tour. "But he's also developed this fascination with countryside management and natural habitats, and developed these very particular skills – coppicing, planting, hedge-laying and so forth – that will be with him for the rest of his life." [95]

As, of course, will his BAC in Conservation that, by deliberate design, Bedales made available to him, and that will soon appear on his CV alongside his academic qualifications.

The limits of grammar (or the importance of 'rhetoric')

Today, we associate the word "rhetoric" with the set piece speech, but in the context of the Trivium, it encapsulates all forms of communication, be it an essay, a debate, a play, a presentation or a recital.

Nonetheless, any discussion of rhetoric should begin with the art of speaking – arguably the most important 'skill' of all, yet one which is rarely taught or assessed and all-too-often actively discouraged in schools. We may have moved on from the Victorian idea that children should be "seen, not heard", but there is still a belief, particularly among some traditionalists, that within school "silence is golden".

Yet research into the impact of the home environment on child development suggests that silence is anything but golden, especially when punctuated only by the babble of the television or the blurted commands of distracted or disengaged adults. A seminal piece of research conducted at Stanford University in the 1990s showed how, by the age of just 18 months, low socio-economic status (SES) infants are already six months behind their high SES peers in the number of words they know and the speed at which they can process them.[96] This, the research suggests, is a direct consequence of simply not hearing as much talk at home, as demonstrated by child psychologists Betty Hart and Todd Risley's shocking finding that:

> "Children whose families were on welfare heard about 600 words per hour. Working-class children heard 1,200 words per hour, and children from professional families heard 2,100 words. By age three, a poor child would have heard 30 million fewer words in his home environment than a child from a professional family. And the disparity mattered: the greater the number

94. Pirsig, R. (2014) *Zen and the art of motorcycle maintenance*. New York: Morrow.
95. In conversation with the author, October 2016
96. Fernald, A., Marchman, V. and Weisleder, A. (2012) SES differences in language processing skill and vocabulary are evident at 18 months. *Developmental Science* 16(2) pp.234-248

of words children heard from their parents or caregivers before they were three, the higher their IQ and the better they did in school. TV talk not only didn't help, it was detrimental."[97.]

Importantly, however, the researchers found that children from poorer families where parents did talk a lot at home performed as well in the third grade at school as wealthier members of the cohort; a finding that underlines the power of words, and parental attention more generally, in the fight against poverty and educational failure.

These families are the exception, not the rule, however. As a direct result of hearing fewer words throughout infancy, half of all children in areas of social disadvantage in England start school with poor language, with children from low income families lagging behind by nearly one year in vocabulary by the age of five.[98.] And, because of the monologic nature of many classrooms, their relative inarticulacy, and the poor self-esteem, behaviour and levels of motivation it can lead to, often go undetected. Indeed, researchers report that, in contemporary English schools, children from low socio-economic backgrounds speak an average of just four words per lesson.[99.]

That's why, at School 21, oracy – the art of speaking well – is put on an equal footing with reading and writing, a message reinforced by teaching it as a subject in its own right in year 7. Thereafter, teachers are expected to embed oracy across the curriculum and in all aspects of their practice, reflecting the school's focus not only on learning to talk, but on learning through talk, a distinction Peter Hyman explains in the following terms:

> "We explain oracy as the overlap between 'learning to talk and learning through talk', and I think that's crucial…. Learning to talk is a skill in itself. How do you learn to be a compelling speaker, to hold an audience, to interest people with how you're talking? Then learning through talk is how talk gives you better writing, better thinking, a better understanding of key concepts."[100.]

With regards to learning to talk, School 21 breaks the art into four strands: the physical (the tone, pitch, pace and timbre of our voices and the way we use facial expressions, gestures and our bodies), the cognitive (how we construct our arguments and use logic and analysis), the linguistic (how we express ourselves, the words we use, our ability to adopt different styles of language, formal and informal), and the social/emotional (how we make an impact on different audiences – one-to-one, small groups, large groups, crowds – and demonstrate control).[101.]

To return briefly to David Didau's warning about the knowledge / skills misconception, it is worth noting that although these four elements

97. Hart, B. and Risley, T. (1995) *Meaningful Differences in the Everyday Experience of Young American Children*. University of Kansas

98. Lee, W. (2013) *A Generation Adrift: The case for speech, language and communication to take a central role in schools' policy and practice*. The Communication Trust

99. Ibid.

100. Millard, W. & Menzies, L. (2016) *The State of Speaking in Our Schools*. Available at: www.esu.org/__data/assets/pdf_file/0026/13796/Oracy-State-of-speaking-report-v2.pdf

101. School 21. (2017) Welcome to School 21 [online] Available at: www.school21.org.uk/voice21 [Accessed 13 Oct. 2017]

of effective speech are taught explicitly in year 7, Hyman is clear that this is essentially a "pump-priming" exercise – a way of forcing staff and students to think about speaking skills in the abstract before going on to develop and hone those skills within particular knowledge domains. This is an important acknowledgment: that talking authoritatively or thoughtfully or passionately about history, for example, requires the speaker to understand the rules of history as well as the rules of speech. And that those rules – the grammar and language of history – are quite different to the rules that pertain to scientific enquiry say, or to music. Which is why people can communicate effectively when talking about things they know a lot about but struggle when discussing things about which they are ignorant.

Oracy is, of course, but one form of rhetoric, the role of which within the Trivium Martin Robinson explains thus:

> "The continuing struggle between the tradition of grammar and the modernist critique of dialectic needs to be resolved. Grammar (the transfer of knowledge and culture) submits itself to dialectic (the contemporary analysis, discussion, challenge and debate) which can, in turn, bring about progress, creative tension, destruction and change. But this is a cycle without end. In order to get out of the loop, something different has to happen. The way beyond this negative battle of will can be found in the moment of pause and culmination provided by rhetoric. For example, by taking part in or reflecting on a performance… Rhetoric is a peroration, an act of summation, or evaluation. It has both an informal and formal role, embracing methods through which young people can become more confident citizens and communicate and celebrate what it is to feel, to think, to be eloquent."[102]

These methods might include theatre, speech making, poetry readings, music recitals, dance, sports events, community spectacles, art exhibitions and much more. Anything, in other words, that allows students to showcase and share their perspectives and passions. In so doing, they will discover how it feels to move people – to entertain, provoke, amuse, intrigue or inspire – and to be moved in return. And it is here, in the emotional connections and responses performance produces, that the 'art' of rhetoric speaks directly to a truth science cannot get near: that at the centre of education stands a child, a teacher, a human. And that human is, by dint of her consciousness, inescapably subjective – emotional and spiritual as well as rational, drawn to the unmeasurable and unknowable as well as to knowledge. Love, beauty, ultimate meaning – these are the things the arts can help us explore, and by embracing the true spirit of rhetoric, and of romanticism, a school can lead students on that journey.

All of which sits oddly with the scientism that characterises so much of the contemporary education debate. Which explains why teachers of the visual and performing arts often feel obliged to justify their place in the school timetable by reference to the benefits that might 'spillover' from their subjects to those academic subjects the government values more

102.   Robinson, M. (2013) *Trivium 21c: preparing you people for the future with lessons from the past*. Independent Thinking Press

– numeracy and literacy, maths and English above all.

The problem (if that is what it is) is that evidence of arts participation boosting attainment in English, maths and other academic subjects is, truth be told, thin. A meta-analysis of the benefits of engaging in culture commissioned by the UK government, found that:

> "Participation of young people in [structured arts] activities could increase their cognitive abilities test scores by 16 percent and 19 percent, on average, above that of non-participants."[103]

But the authors also found that these gains, captured in IQ and other tests of intelligence, didn't translate into significant attainment gains, with test scores for those engaging with the arts just one to two percent higher. A study of the impact of arts participation on low-income students in the US also makes bold claims – that the arts deliver better grades, higher levels of college enrolment, better college graduation rates, higher levels of participation in service clubs and so forth.[104] Yet the authors are actually reporting correlation, not causation, a critical flaw their report shares with a recent publication from the New Schools Network in the UK that sought to prove that the introduction of the Ebacc has not, contrary to the claims of the cultural sector, damaged the arts.[105] All we can conclude with certainty from these reports is that academically high achieving students take more subjects and enter more exams (including the arts), and tend to do better in them, than lower attaining students – a less than earth shattering finding.

Overall, however, researchers find that if higher attainment in non-arts subjects is the goal, there may be quicker and more effective ways of achieving it than through the arts. Consequently, they argue, if we want to understand the true value of the arts, there are better things to look at than their impact on attainment in non-arts subjects. That such a statement of the obvious needs making at all says a lot about the degree to which the government's obsession with literacy and numeracy has coloured the wider debate.

As Geoffrey Crossick and Patrycja Kaszynska, the authors of King's College London's Understanding the value of arts and culture report, note:

> "It has become customary to consider what the arts might do for other domains of learning by way of transferable skills and knowledge – to ask,

103.   Newman, M., Bird, K., Tripney, J., Kalra, N., Kwan, I., Bangpan, M. and Vigurs, C. (2010) *Understanding the impact of engagement in culture and sport: A systematic review of the learning impacts for young people*. CASE: the culture and sport evidence programme led by DCMS in collaboration with Arts Council England, English Heritage, Museums Libraries Archives Council and Sport England. Available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/88447/CASE-systematic-review-July10.pdf

104.   Catterall, J., Dumais, S. and Hampden-Thompson, G. (2012) *The Arts and Achievement in At-Risk Youth: Findings from Four Longitudinal Studies*. Research Report #55. [pdf] Washington, DC: National Endowment for the Arts. Available at: www.arts.gov/sites/default/files/Arts-At-Risk-Youth.pdf

105.   Fellows, E. (2017) *The Two Cultures: Do schools have to choose between the EBacc and the arts?* [pdf] A good school for every child and New Schools Network. Available at: www.newschoolsnetwork.org/sites/default/files/NSN%20Arts%20Report%20-%20The%20Two%20Cultures_0.pdf

for example, whether music improves mathematical learning. As well as concerns over what might be seen as the instrumentalisation of arts learning, this raises questions about the hierarchy of disciplines and learning outcomes. It would be considered unusual to investigate the effects of mathematical learning on musical abilities and one has to ask why the rarity of that reversal should be the case."[106.]

Perhaps the best summary of the evidence of the impact of arts participation on academic attainment – and of what we should make of that evidence – comes from the authors of a 2013 OECD report entitled Art for art's sake?, who conclude:

"We did not find support for the kinds of claims that we typically hear made about the arts – that infusing the arts in our schools improves academic performance in the form of higher verbal and mathematical test scores and better grades and makes children more innovative thinkers. It is here that we have to conclude: not yet proven!

Ultimately, the impact of arts education on other non-arts skills and on innovation in the labour market should not be the primary justification for arts education in today's curricula. The arts have been in existence since the earliest human, are part of all cultures, and are a major domain of human experience, just like science, technology, mathematics and humanities. The arts are important in their own rights for education. Students who gain mastery in an art form may discover their life's work or their life's passion. But for all children, the arts allow a different way of understanding than the sciences. Because they are an arena without right and wrong answers, they free students to explore and experiment. They are also a place to introspect and find personal meaning."[107.]

It would be a grave mistake to conclude from this that evidence has no role to play in the teaching of arts, however. The arts may be subjective and our artistic preferences diverse, but there's little to be gained from sheltering behind those facts when there is so much still to be learnt about how best to teach – the arts as much as anything else.

It is for that reason that the RSA, together with the Education Endowment Foundation, is embarking on the UK's largest ever set of randomised control trials, and a parallel programme of qualitative research, to better understand the impacts on primary school children of five different forms of arts and cultural education. Yes, these trials will be evaluated for their direct impact on academic performance, but the research programme as a whole is designed to uncover a wealth of other information about the impact of participation on students' characters, attitudes and behaviours, and about the importance of context – of the learning environment – to achieving those impacts.

Of particular interest will be whether the interventions being evaluated achieve bigger impacts in schools like the Plymouth School of Creative

106. Stern, M. and Seifert, S. (2016) Understanding the value of arts & culture: the AHRC cultural value project (2016) by Geoffrey Crossick and Patrycja Kaszynska. *Cultural Trends* 25(4), pp.277-279

107. Winner, E., Goldstein, T. and Vincent-Lancrin, D. (2013) *Art for Art's Sake?* Overview, OECD Publishing.

Arts whose headteacher Dave Strudwick has put art and creativity at the very centre of the school's mission, with the purpose-designed building comprising nothing but studios, auditoriums, workshops and flexible open plan creative spaces in which local and visiting artists regularly work alongside teachers and pupils. Yet this is not an art school. It is a mainstream secondary school that teaches the full range of examined and non-examined subjects, but is doing so in ways deliberately designed to foster creativity.

Above all, however, the RSA's partnership with the EEF aims to provide valuable information to inform and improve professional practice; information about precisely what it is about different arts and cultural activities that benefits students. After all, many of the things that the EEF's and John Hattie's reviews show to be most effective in helping students learn are the very things that occur within the arts.[108] The process of drafting and redrafting that takes place within the visual arts, for example. The feedback and rehearsal at the heart of drama. The deliberate practice and mastery required of a musician. The motor skills developed in the dance studio. The motivation and inspiration drawn from a memorable experience, be it a play, a concert or an exhibition. Arts and cultural organisations are understandably nervous about the often reductive nature of educational research, with its effect-sizes, its cost/benefit analysis and its narrow focus on academic attainment. But there is little to lose, and a good deal to gain, from moving the conversation beyond the question of whether arts participation delivers benefits to learners to one about the nature of those benefits, how they are best captured, and how arts and cultural organisations, working together with teachers, can use evidence to improve their practice.

The fact that evaluation has an important role to play in informing the commissioning and delivery of arts and cultural education should not obscure a fundamental truth however: that rhetoric – much of which concerns the exploration of the subjective, emotional, aesthetic and spiritual aspects of the human condition – does not easily submit to objective measurement.

Why does this represent a challenge to traditionalists and grammarians? Partly because their laser-like focus on the core academic curriculum – the Ebacc – risks marginalising the creative subjects. And partly because, although the arts also have their own grammar – their history, rules, structures and techniques – their ultimate value resides in their promise of creativity and self-expression. This is not to diminish the importance of learning from the masters. After all, as British artist Damian Hirst put it: "You've got to be able to copy things faithfully before you can deviate."[109] But that wouldn't be much of a quote without the last four words. And a student won't become a true rhetorician if, having learnt from the past, they can't adapt it for the present. For rhetoric, ultimately, is about finding your own voice, writing your own rules and leaving your own mark.

108.   See, B. and Kokotsaki, D. (2016) Impact of arts education on children's learning and wider outcomes. Review of Education, 4(3), pp.234-262; Hattie, J. and Donoghue, G. (2016) Learning strategies: a synthesis and conceptual model. *Science of Learning 1*. Article number: 16013

109.   Gayford, M. (2005) Damien Hirst: A brush with Mr Hirst. [online] *The Independent*. Available at: www.independent.co.uk/news/people/profiles/damien-hirst-a-brush-with-mr-hirst-527919.html [Accessed 12 Oct. 2017]

The over-reliance on structure and stricture (or the importance of character)

One effect of the decision, taken first in the US and later in the UK, to allow third sector providers to set up or take over state-funded schools, was to bring new people, with new perspectives, new ideas and new approaches to bear on what, on both sides of the Atlantic, is arguably the education system's biggest problem – the chronic underperformance of poor children.

In the US, it was KIPP (Knowledge is Power Programme) schools that blazed the trail for others, like Achievement First and Uncommon Schools, who would commit themselves to the task of getting inner city kids – almost all of them black or Hispanic and eligible for free school meals – into college.[110.] Recruiting young, bright graduates with a strong sense of social mission, often from the Teach for America scheme, these schools would provide long days of immersive, high-energy, high-intensity classroom instruction combined with an elaborate programme of attitude adjustment and behaviour modification. High expectations were set, ambitious mantras displayed, supporting rituals established, home-school contracts signed and contextual excuses banned. And it worked. The first cohort to sit public exams in KIPP's first school – the KIPP Academy, a middle school in the South Bronx – came top of their borough and fifth in the whole of New York City, an unheard of result for a non-selective school in a poor neighbourhood. Overnight, these 38 students, and their school, became front page news.

But as Paul Tough recounts in *How children succeed: grit, curiosity and the hidden power of character*, things quickly started going wrong for the class of 2003 (as they were named when they arrived at middle school – that being the date they were expected to start university). Most of the 38 had made it through high school and enrolled in college. But six years after high school graduation, just eight of them had completed a four-year college degree.

As Tough sets out to discover what went wrong and why, he meets up with Tyrell Vance, a member of the class of 2003:

> "Like so many students in that class, Vance was a math star in middle school, acing the citywide test, passing the ninth-grade state math course when he was still in eighth grade. But when he got to high school, he told me, away from KIPP's blast furnace of ambition, he lost his intensity. "I didn't have the drive that I had when I was at KIPP" he explained. He started coasting and his report cards were soon filled with Cs instead of the As and Bs he'd been getting in middle school. The way Vance sees it today, KIPP set him up for high school very well academically, but it didn't prepare him emotionally or psychologically. "We went from having that close-knit family, where everyone knew what you were doing, to high school, where there's no one on you," he said. "There's no one checking if you did your homework."[111.]

110.   KIPP Public Charter Schools. (n.d.) KIPP Public Charter Schools, College Preparatory Schools. [online] Available at: www.kipp.org/ [Accessed 13 Oct. 2017]
111.   Tough, P. (2012) *How Children Succeed: Grit, Curiosity, and the Hidden Power of Character* Boston: Houghton Mifflin Harcourt

Vance enrolled in a four-year college to study computing, found the course boring so switched to another, but didn't get along with the department head so dropped out. He later enrolled in another college to study history, but then dropped out again, this time for good. When Tough caught up with him, he was working in a call centre. "I had a lot of potential" he told him, "and I probably should have done more with it."[112.]

Why he didn't – why he and so many of KIPP's other intensively-drilled students with good grades ended up dropping out of college and taking up low-paid, routine jobs – is the subject of the rest of Tough's 250 page book which puts forward the following highly convincing thesis:

Poor children are more likely to be exposed to stress in their earliest years as a result of traumatic experiences – abandonment, neglect, family conflict, addiction, illness, debt and so forth – that are more prevalent in the lowest income households and neighbourhoods. To protect us, our bodies have a stress management system – a chemical process called allostasis – but this can easily become overloaded if called into action too often. And when it is, it not only does damage to the body (danger-ously raising blood pressure, for example, increasing the risk of heart attack) but damages the brain – the prefrontal cortex in particular. And because the prefrontal cortex is critical to self-regulation, people who suffer serious allostatic overload in early childhood as a consequence of sustained trauma, generally find it harder to concentrate, sit still, rebound from disappointments and follow instructions, all of which have a direct and hugely negative impact on their performance in school. Which is why, Tough argues, any strategy to transform the prospects of children from the poorest households has to focus on the underlying problem (their rela-tive lack of resilience, perseverance, self-discipline and self-confidence) not the apparent problem (a lack of knowledge or learning power). Tough then cites a string of tests, trials and case studies which, by demonstrating the predictive power of these non-cognitive skills and character attributes on later life outcomes, support his central thesis: that a lack of cognitive training is not why poor kids are failing in education.[113.]

If correct, Tough's hypothesis poses a direct challenge to all schools, but particularly those like Michaela in Brent and, to a lesser extent, Reach Academy in Feltham, that bear the closest resemblance to the South Bronx KIPP Academy of the 1990s – those, in other words, that place the greatest faith in the levelling power of a knowledge curricu-lum delivered through high-energy, high-intensity teaching backed by structures and strictures to direct students' behaviour. When I asked Katharine Birbalsingh, Michaela's headteacher, whether she was worried her students, once off her incredibly short leash, might lose their way, she answered:

> "No, and I'll tell you why. Our pupils quickly realise when they arrive here
> that if they don't obey the rules and work hard they'll be punished. And
> at first that's why they behave and put in the effort – to avoid punishment.
> But after a while, this way of behaving, this work ethic, becomes a habit.

112. Ibid.
113. Ibid.

The Ideal School Exhibition

> And before you know it, they have become courteous and conscientious not to avoid a detention, but because that is who they are. That is who they have become."[114.]

With Michaela's oldest students just 14-years-old, it is too early to know whether Birbalshingh will be proved right; whether her students will continue to flourish when they leave school and realise that, for the first time, almost every choice they face is theirs to make. But the KIPP story suggests that this transition – from a school where a student's every moment and every movement is carefully tracked and controlled, to a university where there is very little structure and support – is fraught with risk. Which is why KIPP's founder David Levin, as the number of his former students dropping out of college rose on an almost monthly basis, decided that knowledge on its own, did not equal 'power' after all. Instead, he decided, knowledge plus character was the key to success – a message his schools would drive home relentlessly as they told their students that what mattered was not just how much they knew, but how hard they worked, how much they believed in themselves and how they responded to set backs.

Interestingly, this conclusion – that knowledge plus character is what is needed if a poor child is to escape the circumstances of her birth – is also accepted by E D Hirsch, the world's foremost advocate of knowledge-based schooling, who, in a review of Tough's book, explains what he sees as its key intellectual flaw:

> "The critical missing element in Tough's otherwise informative book is the phrase 'other things being equal'. He effectively shows that people who have more grit, character and persistence will succeed better than those who have less, other things being equal."[115.]

As to what those other things are, Hirsch's answer is knowledge and vocabulary, which, in terms of predictive power, come first, then fine-motor skill, which is correlated with the development of "executive function." In third place, Hirsch explains: "come the non-cognitive features that Tough emphasises in his book." Which is why, he continues, if Tough had updated the "both/and" tradition when it comes to the relationship between knowledge and character – a tradition that goes back through Locke's *Some Thoughts Concerning Education* all the way to Plato's *Republic* – "he would have no argument from me."[116.]

Considering that a recent meta-analysis[117.] looking at studies involving 66,000 individuals found that grit, or resilience, "is only moderately correlated with performance" (effect size 0.18), while a longitudinal study of more than 70,000 English children, looking at the power of psychometric tests at age 11 to predict GCSE results five years later, found a correlation

114. In conversation with the author (December 2016)
115. Hirsch Jr., E.D. (2013) Primer on Success: character and knowledge make the difference. *Education Next* 13(1)
116. Ibid.
117. Credé, M. et al. (2017) Much Ado About Grit: a meta-analytic synthesis of the grit literature. *Journal of Personality and Social Psychology* 113 (3), 492-511

between IQ and performance of 0.81,[118.] "both/and" seems like a more secure place to stand than "either/or" in the debate about character and cognition.

And that is precisely where Levin, having studied the work of economist James Heckman and psychologists Angela Duckworth, Christopher Peterson and Martin Seligman, decided to stand. Based on the findings of their research, Levin settled on a list of seven character traits – grit, self-control, zest, social intelligence, gratitude, optimism and curiosity – that would be deliberately cultivated alongside the transmission of knowledge.[119.] They were emblazoned on the walls of KIPP's schools, discussed in its classrooms, modelled by its staff and graded and communicated to students and their parents twice a year in a character report card.

As to whether this worked, the jury remains out. Of those early KIPP students, 33 percent graduated from a four-year college degree programme. That completion rate has since risen to over 40 percent, which compares favourably to the low income schools average, but is well below their target of 75 percent and means over half of the 89 percent of KIPP students who enrol in college still end up dropping out – a still startling rate of attrition.[120.]

As to what KIPP might be doing wrong in their efforts to cultivate those character traits that Vance and other members of the Class of 2003 seemed to lack, Professors Guy Claxton and Bill Lucas of the University of Winchester offer the following observations:

"Many practical lessons have been learned in the last 20 years about what does and does not work in this regard. It does not work to bolt on de-contextualised bouts of 'thinking skills training', or to think that such outcomes can be dealt with through separate strands of 'social and emotional aspects of learning (SEAL)', 'personal, social and health education (PSHE)' or 'tutorial time', for example. To be effective, there has to be a sustained effort to embed the cultivation of these traits within the routine, on-going life of lessons and schemes of work… Neither does it work to treat these dispositions as yet more things to be taught through conventional classroom methods of transmission, reading and discussion…. And finally, it does not work to treat these complex, evolving dispositions as if they were merely technical 'skills' that could be 'trained' in short order."[121.]

Instead, they argue, the development of these dispositions takes time, as it is really a process of habit formation:

"We know from the psychological literature that habit formation is a kind of learning in which knowledge of facts and intellectual understanding

118.   Deary, I. J. et al. (2007) Intelligence and Educational Achievement, *Intelligence* Vol. 35 pp. 13-21.

119.   KIPP Public Charter Schools. (2017) Character strengths, Learn why KIPP focuses on character development. [online] Available at: www.kipp.org/approach/character/ [Accessed 13 Oct. 2017]

120.   The promise of college completion. (2016) [ebook] KIPP. Available at: www.kipp.org/wp-content/uploads/2016/09/CollegeCompletionReport.pdf [Accessed 13 Oct. 2017]

121.   Claxton, G. and Lucas, B. (2016) Open Dialogue: The Hole in the Heart of Education (and the role of psychology in addressing it). *The Psychology of Education Review* 40(1) pp.4-12

play only a small role… Habit formation involves the progressive re-wiring of neural connectivity, and even in the case of simple habits, this usually takes the order of two months of awareness and determination. This means that teachers have to create a learning environment that functions as a continual incubator of the strengths and habits they want their students to develop."[122.]

Claxton and Lucas are surely right to talk about the importance of students' inner resources – their characters – in helping them make the most of their academic learning, and of the role of schools in strengthening, or at the very least helping students summon, those resources. As to how that is best done, with the important caveat that this is an area of science still very much in its infancy, Claxton and Lucas' assertion that, unlike propositional knowledge, character traits are more like gradually absorbed habits, is persuasive. What is more, their recommendation that they be cultivated gradually within a learning and living environment that embeds them in daily routines, rather than one that seeks to transmit them through set-piece instruction, also has the advantage of steering schools away from trying to teach these things explicitly, in "resilience" or "perseverance" lessons. Experience suggests that this is something many will be tempted to do, especially if calls to measure character, and mark students' progress against character development goals, are heeded. Tempting as this might seem to those who would like to see a more holistic education incentivised by the assessment and accountability regimes, the risks of developing a set of metrics against which character development can be measured are significant. Not only are these non-cognitive skills, like the higher-order thinking skills David Didau discusses earlier, fiendishly difficult to disentangle from domain knowledge for the purposes of assessment, but any attempt to measure achievement or progress in the development of character risks all the problems we see in the academic sphere: the incentive to game the system and teach-to-the test with the result that we end up hollowing out the very thing that we are trying to measure; the likelihood that schools will be drawn to superficial tick-box approaches, with inputs (lists of character building activities) taking the place of outcomes; the loss of yet more precious curriculum time as measured activities squeeze out unmeasured ones; and a boom period for that burgeoning industry of life-coaches and self-improvement pseudo-scientists that already circle our schools and workplaces, their unfalsifiable theories and "sky's the limit" clichés at the ready.

While it was the leaders of those mission-oriented schools that put the greatest emphasis on skills who also put the greatest emphasis on character, there are plenty of traditionalists and conservatives who are no less evangelical about character education. Indeed, former secretary of state Nicky Morgan has just published a book on the subject called *Taught not caught: education for 21st Century character*, while James O'Shaunessy, who ran David Cameron's No. 10 policy unit, has since set up the Floreat Multi-Academy Trust, a chain of character-focused primary schools in London.

To get a better sense of how traditionalists view the issue of character, it is worth listening to Joe Kirby, the recently departed deputy head of

122. Ibid.

Michaela, talk about the philosophical underpinnings of the school's famously strict approach to behaviour management. Citing the work of social psychologist Jonathan Haidt, Kirby explains:

> "Haidt proposes that all cultures construct their moral matrices on shared cognitive foundations. He suggests that six shared moral 'receptors' are care, fairness, liberty, authority, loyalty and sanctity (or tradition). Haidt suggests that progressives tend to value care, fairness and liberty over authority, loyalty and tradition."[123]

In a sign of how dominant progressive or liberal values have become in the West, Haidt compares our morality with that of non-western cultures, noting that:

> "Whereas in the West, the moral order is the individualistic autonomy paradigm, in Asia, the moral order is the community responsibility paradigm. In one study, Americans finished the sentence 'I am…' with their own characteristics: '…outgoing, curious' etc. and Asians finished it with their roles and relationships '…a teacher, a son' etc. Western and non-Western people think differently, see the world differently, and have different moral concerns. Non-western societies tend to value duty, responsibility, respect, loyalty, authority, hierarchy, humility, obedience, community, family, deference, and self-discipline."[124]

And because these values are critical to the development of what Haidt calls moral capital – the beliefs and practices that suppress self-interest and promote cooperation – he argues that we in the West, by de-emphasising them, are storing up serious problems:

> "If you are trying to change an organisation or a society and you do not consider the effects of your changes on moral capital, you're asking for trouble. This is the fundamental blind spot of the left… We humans need healthy hives in order to flourish. You can't help the bees by harming the hive. In their zeal to help victims, progressives often push for changes that weaken traditions, institutions and moral capital. The urge to protect students from oppressive authorities in the 1970s has eroded moral capital in schools, creating disorderly, unsafe environments that harm the poorest above all. Reforms sometimes harm the very victims progressives are trying to help."[125]

This emphasis on non-Western, and particularly on East Asian, values, explains why, when the staff at Michaela recently published a book explaining what they do and why, they named it *The battle hymn of the tiger teachers*, a deliberate echo of Amy Chua's best-selling book which examined differences between Chinese and American approaches to

---

123.   Kirby, J. (2016) *The red pill of moral psychology*. [online]. Available at: https://pragmaticreform.wordpress.com/2016/10/01/the-red-pill-of-moral-psychology/
124.   Haidt, J. (2007) *The Happiness Hypothesis: Putting Ancient Wisdom to the Test of Modern Science*. Arrow.
125.   Ibid.

parenting.[126.] It also explains why the character strength that Michaela promotes above all others, and which is explored further in the book, is stoicism – a philosophy of uncomplaining acceptance that makes punishment and other sources of potential frustration or resentment easier to endure.

In my brief conversations with Michaela students during my visit, this stoicism was everywhere to see. Alongside their unmistakable pride in their extraordinary academic accomplishments, was a sentiment I heard over and over again: that the school's famously strict approach to behaviour management is "for my own good", that it "keeps me safe" and "will make me a better person."

This attitude – that a punishment is something to be thankful for as it will deliver a promised dividend in adulthood – couldn't be more different to the attitude Peter Hyman is trying to cultivate when he tells the children at School 21 that "today matters"; that school is there to be enjoyed, not endured, stoically or otherwise.

And although the primary purpose of a school is to educate, not to entertain, this idea – that learning should be fun, or at least not joyless – is highly relevant if we want our schools to nurture young people's natural inquisitiveness and to produce curious adults who are determined to go on learning for the rest of their lives.

Which is why a recent piece of ethnographic research by Joanne Golann of Vanderbilt University in Tennessee, which found that 'no excuses' schools produce "worker-learners —children who monitor themselves, hold back their opinions, and defer to authority — rather than lifelong learners" should at the very least give us pause.[127.]

126.   Birbalsingh, K. (2016) *Battle hymn of the tiger teachers* John Catt Educational Ltd
127.   Golann, J.W. (2015) *The Paradox of Success at a No-Excuses School,* Sociology of Education, Vol 88, Issue 2, Available at: journals.sagepub.com/doi/abs/10.1177/0038040714567866

4.4 Challenges for all mission-oriented schools

4.4.1   Building an inclusive school

If an over-reliance on structure and stricture represents a clear risk to schools like Michaela, what of the opposite problem – that of a school where behaviour has deteriorated to such an extent that children struggle to study, and those who try are mocked or menaced for their studiousness?

After all, an inclusive school must, first and foremost, be one where all children and young people feel safe – where they can go about their daily lives without fear of bullying, be themselves without being ridiculed, and learn without being constantly disrupted.

Managing behaviour

Social and mainstream media regularly report a "behaviour crisis" in our schools. But how bad is the problem really?

A recent government commissioned review, led by researchED founder Tom Bennett, summarises the evidence.[128] He starts by noting the positive picture painted both by successive Ofsted reports, which declared behaviour to be "satisfactory" or better in between 92 and 99.7 percent of schools at various points between 2002 and 2012, and by the government commissioned Steer Report of 2009, which concluded that: "the overall standard of behaviour achieved by schools is good and has improved in recent years."[129]

But he contrasts this with the more concerning findings of most other surveys of the last quarter century. In 1994, Michael Barber, who would later run Tony Blair's Delivery Unit, reported that "a disruptive minority of 10 to 15 percent of pupils are seriously undermining the quality of education in as many as half of all secondary schools."[130] A 2001 survey by the National Union of Teachers found that 69 percent of teachers reported experience of disruptive behaviour "weekly or more frequently."[131] A 2010 Times Educational Supplement survey found that 35 percent of heads believed that pupil behaviour had deteriorated over the past 12 years, and an Association of Teachers and Lecturers 2009 survey reported that 87.3 percent of staff had dealt with disruptive students over the that academic year, with 95.8 percent reporting that this had at times resulted in disruption of pupils' work.[132]

128.   Bennett, T. (2017) *Independent Review of Schools: Creating a Culture: how school leaders can optimise behaviour.* Department for Education.

129.   Steer, A. (2009) *Learning behaviour: Lessons learned, a review of behaviour standards and practices in our schools.* London: DCSF.

130.   Barber, M. (1994) *Young people and their attitude to school,* interim report of a research project at the Centre for Successful Schools (Keele, University of Keele).

131.   Neill, S. R. St. J. (2001) Unacceptable Pupil Behaviour: A survey analysed for the National Union of Teachers, *University of Warwick* Institute of Education.

132.   Association of Teachers and Lecturers Annual Conference (2009) *Violent pupils and parents make teachers lives a misery.* [online]. Available at: www.atl.org.uk/Images/Pupil%20%20Parent%20Behaviour-%20press%20release%20April%202009.pdf

Student surveys paint a similar picture with a 2010 PISA report finding that in England, 31 percent of pupils felt that "in most or all lessons…. there is noise and disorder", and a later government-commissioned survey reporting that a majority of pupils in England said that they had experienced disruption to their learning.[133.]

Taken together, these surveys are hard to square with Ofsted's 2012 judgement that behaviour was unsatisfactory in just 0.3 percent of schools, especially when one adds in the exclusion figures for that same year showing that 330,000 pupils were excluded, 5,080 of them permanently, with 34 percent of permanent exclusions and 25 percent of fixed period exclusions resulting from disruptive behaviour.[134.]

In any case, that implausibly sanguine judgement would be flatly contradicted by the Chief Inspector Michael Wilshaw later that year when he claimed that as many as 700,000 pupils were having their academic progress impeded by low level disruption[135.] – a view supported in 2014 by an official Ofsted report entitled Below the Radar, which found that pupils were potentially losing up to an hour a day of learning time as a consequence of disruption in classrooms, the equivalent of 38 days per year. [136.]

How best to deal with disruptive students takes us straight back into some fundamental, values-based judgements about authority and obedience, and the relationship between adult and child. For his part, Bennett is clear:

> "Directing students to behave in a specific way is often mischaracterised as an act of oppression. This is both unhelpful and untrue. It is the duty of every adult to help create in students the habit of self-restraint or self-regulation. This must be mastered before students can consider themselves to be truly free. To be in control of one's own immediate inclinations or desires and fancies, is a liberty far more valuable than the absence of restraint. Compliance is only one of several rungs on a behavioural ladder we hope all our students will climb, but it is a necessary one to achieve first. Once obtained, students can then be supported into true autonomy and independence, where they reliably and consciously make wise and civil decisions without supervision or restraint. This process closely mirrors the broader model of human maturation, in which schools have a part to play. In fact, the belief that directing student behaviour is harmful to their development is a serious attitudinal impediment to developing schools with better behaviour cultures."[137.]

Katharine Birbalsingh at Michaela, where a child can be put in detention for as little as turning around during class, makes no apology for setting her school's boundaries where she does, explaining:

133. Bradshaw, J. et al. (2010) Trends in child subjective well-being in the United Kingdom, *Paper for the Social Policy Association Conference*

134. Department for Education (2012) *Permanent and fixed period exclusions from schools in England 2010/11*. Available at: http://www.education.gov.uk/rsgateway/DB/SFR/s001080/index.shtml

135. Ofsted (2013) *Annual report of Her Majesty's Chief Inspector of Schools, 2012–13* London: Ofsted;

136. Ofsted (2014) *Below the radar: low-level disruption in the country's classrooms.* London: Ofsted.

137. Bennett, T. (2017) *Independent Review of Schools: Creating a Culture: how school leaders can optimise behaviour.* Department for Education.

"Every school has a behaviour policy. And every school, at some point, has to use punishments to implement that policy. So the question isn't whether or not you use sanctions. The question is when you use them. Do you do it when the first rule is broken, even if the infraction seems rather minor? Or do you wait until the student is standing on a table, swearing or throwing furniture? By choosing the former, we have created a safe and orderly environment where our biggest problems are, compared to some of the things you see elsewhere, pretty small."[138.]

Implementing this short-leash, tough-love approach isn't easy. It requires adults to apply, rigidly and consistently, a set of pre-determined sanctions for a host of minor offences, including a large number that result from forgetfulness, exuberance or instinctiveness, as well as from insolence, laziness or unkindness. That is the hour-by-hour reality of a 'no excuses' approach to behaviour management.

Here's Tom Sherrington, a former headteacher at a large, decades-old inner London comprehensive school (as opposed to a small, new one like Michaela), on why, when you walk into an established culture with entrenched expectations and behavioural norms, a strict 'no excuses' approach is so difficult to implement:

"At my school we're continually seeking to improve our behaviour systems. I think my staff do a phenomenal job in this area, day in day out. We're trying to make it tighter but also warmer, more consistently fair and less dominant relative to rewards for the majority of students. We do have some binary rules. Regardless of context, family background and so on, we do hold a 'no excuses' approach to several things. We have lunch time detentions that are given automatically: top button, chewing, being late, equipment (pen, pencil, ruler, PE kit, musical instrument etc). No nonsense, no excuses – in principle, at least. Students know this is a fair cop; they know the rules…

So even though we have some No Excuses elements to our system, what are the challenges to the No Excuses principle? There are a few.

Culture Change: it is one thing to set up a new school with a small intake setting out your stall from the start (I've done this); it's quite another to change the culture of an existing school with 210 per year group. You don't get automatic buy-in; there's no 'take it or leave it'. You have to win the argument as well as enforce the rules.

Enforcement fatigue: We're running a school, not a penal institution. Whilst supportive of the system in spirit, a lot of teachers and leaders find it hard to sustain absolute boundaries with absolute relentless consistency. We're not machines.

Human variation: Defining boundaries is difficult. Pen/no-pen is easy; late is late. But levels of expectations and tolerance for types of talking, in-class communication, perceptions of tone – eg rudeness – can't be defined. People are rarely consistent within their own scale, never mind being consistent with their colleague next door.

Group behaviour: Sanctions only work if they belong to one person's actions; where they have made a bad choice for which there is a

138. In conversation with the author (December 2016)

consequence. But often there are group behaviours that can be challenging. You have to influence a group to change its behaviour, you can't simply punish it out of them, especially when the chances of injustice are so high.

Emotional behaviour: Kids get upset. Some troubled teenagers reach the point where they literally don't care what happens next in the heat of the moment; they lose all perspective; they say terrible things. Do we punish them for that – or do we show understanding?

The missed lesson paradox: Any sanction that takes students out of lessons makes it that bit harder for them to keep up with their learning. This adds to all the negative associations they might have about learning or school life in general. So, in enforcing the rules, you have to have a way of minimising the disengagement that often follows.

Duck's backs: Even when we apply the rules consistently every day, by the book, we find that, for about 10 percent of students, it doesn't yield improvement. Detentions and other sanctions – even fixed term exclusions in some cases – it's all water off a duck's back. 'Yup, I'm late, I'll take the detention, whatevs'. Then what? We have to up the ante and there's only so far you can go with that.

The pin ball kids: Within the 10 percent there is a small number – maybe up to 30 students out of 1,000 – who simply hit the boundaries all week long. They get knocked from sanction to sanction, from meeting to meeting, from intervention to intervention, without their behaviours changing. They're trying, we're all trying, but there are only so many detentions you can sit. 'No excuses' is way off the map in terms of being relevant here. Nobody is making excuses; they're too busy trying to find solutions.

Parents: Sometimes the issues don't sit with the students. They sit firmly with parents who actively engage in order to undermine school systems. To what extent can a school sanction a child for defiance driven by parental attitudes?

The end of the road: No excuses suggests that, ultimately, you reach the end of the road. I'm not squeamish about doing this. Permanent exclusion can be necessary; there has to be an End of the Road that is real. But I have to look the Principal of the PRU (Pupil Referral Unit) in the eye and tell them that we did all we could; that has to be true. You can't just dump and run, expecting someone else to pick up the pieces. Not if you have integrity and any sense of playing a role in a wider system serving a community. Is that an excuse?"[139.]

A good many heads will have more than a bit of sympathy with Sherrington, as I do. He is right to say that the challenge he faced is of an entirely different order than that faced by a founder-head at a brand new school. And that, in the situation in which he found himself, the rigid implementation of a tight 'no excuses' policy carries unavoidable and heavy costs, not least for those alternative providers who are required to pick up the pieces when the school decides it has reached the end of the road (as many a 'Surgeon' head with fewer scruples than Sherrington would be only too happy to do, knowing that decision will boost the

139. Sherrington, T. (2016) *No Excuses and the pinball kids, Teacherhead* [blog]. Available at: teacherhead.com/2016/11/20/no-excuses-and-the-pinball-kids/

school's performance numbers and the head's reputation).

Nonetheless, there may be some policies and approaches (like same-day centralised detentions for example) that other schools – even those with radically different values – might pick up from Michaela and adapt to their own circumstances.

Ultimately, however, it isn't by inventing new rules or ways of enforcing them that an excellent learning environment is created. That is done, as Tom Bennett's behaviour report repeatedly emphasises, by building and maintaining a positive culture.[140.]

Here's Peter Hyman again on how he has sought to do this in his school:

"The starting point for us is building a small community bound together by culture, rituals, routines and support that makes every child feel special, supported, challenged and developed. This is done through our strong circle – the way we do morning assemblies – our two core values of integrity and humanity, and our rituals that constantly reinforce the idea of kindness. We have invested huge amounts of time (and money) in coaching groups of 12 instead of tutor groups of 25 plus. These coaching groups meet three or four times a week for 50 mins (whole lessons) and follow an elaborate wellbeing curriculum using literature and drama to develop resilience, kindness, a sense of agency, an ability to rise to challenges. Teachers are trained as coaches – they have one-to-one conversations regularly with students where they do most of the listening not talking – something that is both powerful and unusual in the teacher/pupil relationship. The expectations on students are incredibly high, they know they are in an environment where excellent work through craftsmanship and multiple drafts requires real effort, focus and engagement. Most behavior problems come from boredom or inability to access work. Our rich, varied curriculum and pedagogy means students have a purpose to school, they are hands on – talking, making, shaping, creating, wrestling with big ideas. Most visitors come to the school and say 'I've been here all day yet no-one has mentioned a behaviour policy once'. That is how it should be. When there are behaviour incidents we try to deal with them with consistency and also where appropriate using restorative justice techniques – where students are taught to 'make amends' for what they have done – repairing the damage with the teacher or a fellow pupil, doing community service or even apologising to the strong circle of their peers."[141.]

Again, Hyman's approach, like that of all the mission-oriented school leaders I spoke to, flows directly from his unshakeable beliefs about how to ready children and young people for the challenges waiting for them beyond the school gates. Which is why, ultimately, he rejects the 'no excuses' approach on the following grounds:

"If we want young people to leave school questioning and curious, not accepting everything that authority says because that is the route to

140. Bennett, T. (2017) *Independent Review of Schools: Creating a Culture: how school leaders can optimise behaviour.* Department for Education
141. In correspondence with the author (June 2017)

dictatorship, then we can't have a compliant culture at school because it breeds unthinking citizens. So any liberal, anyone who believes in a thriving, pluralist democracy can't possibly go along with a school based on fear, rules, oppression and punishment to the extent that some schools do. It is simply wrong for the times we live in."[142.]

Setting and streaming

There is a view that the goal of inclusive, comprehensive education is supported, rather than undermined, by the practice of grouping children by ability within school, as this is the best way of stretching the brightest, whose parents might otherwise opt for an academically selective school (or, if they can afford it, a private one). Yet setting (grouping by ability for each subject) and the less common approach of streaming (separating students by ability into classes in which they stay for all subjects), are practices for which there is little supporting evidence.

The EEF found that overall, ability grouping delays students' learning by one month per year, with those assigned to a bottom set falling up to four months behind those in a top set every year. In summary, they note:

> "It appears likely that routine setting or streaming arrangements undermine low attainers' confidence and discourage the belief that attainment can be improved through effort. Research also suggests that ability grouping can have a longer term negative effect on the attitudes and engagement of low attaining pupils."[143.]

Professor Becky Francis, Director of UCL's Institute of Education (IoE) which is conducting a set of EEF-funded randomised control trials into the impact of different approaches to student grouping, notes that, despite the modest benefits for top set students, "The evidence suggests that overall these practices are not of significant benefit to attainment, with a negative impact for lower sets and streams – those wherein pupils from lower socio-economic groups are over-represented."[144.] Explaining this negative impact, Francis' IoE colleague Professor Sue Hallam, writes:

> "The adoption of highly structured ability grouping in schools, particularly as movement between groups is rare, sends a message to students and their parents that the ability to learn is fixed. This places a limit on expectations and leads learners to categorise themselves as having particular levels of intelligence which in turn has an impact on self-beliefs. This is reinforced by the pedagogy adopted by teachers when they teach different ability groups, the resources available and the allocation of the best teachers to the highest ability groups. The increase in highly structured ability grouping at early ages in the UK, which limits the attainment of

142. Ibid.
143. Education Endowment Foundation (2017) Setting or Streaming, Teaching and Learning Toolkit. Available at: educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit/setting-or-streaming/
144. Francis, B. et al. (2015) Exploring the relative lack of impact of research on 'ability grouping' in England: a discourse analytic account, *Cambridge Journal of Education* Vol. 47. Available at: www.tandfonline.com/doi/ref/10.1080/0305764X.2015.1093095?scroll=top

those in the lower groups, means that children's career trajectories are determined in the earliest years of primary school. If schools want to raise standards they need to adopt flexible approaches to grouping which promote positive self-beliefs and incremental mindsets supporting children's learning and motivation."[145.]

Furthermore, it is highly likely that large numbers of students are misallocated when grouped by ability, just as they are by the grammar school entrance exam. To prove the point, Professor Dylan Wiliam shows what would happen if you use a test with a predictive validity of 0.7 and a reliability of 0.9 (these being at the upper limit of what can be achieved with current testing methods, so likely, if anything, to understate the likely degree of misallocation) to assign 100 students to four maths sets, with 35 in the top set, 30 in the second set, 20 in the third set and 15 in the bottom set.[146.]

What he found, as the figure below shows, is that overall, even on his conservative assumptions, a majority of students will be allocated to the wrong set. And within the pool of 51 misallocated students are eight who would find themselves incorrectly assigned to the bottom set, four of whom should actually be in Set 2.[147.]

		Should actually be placed in			
		Set 1	Set 2	Set 3	Set 4
Student placed in	Set 1	23	9	3	
	Set 2	9	12	9	
	Set 3		9	7	4
	Set 4		4	4	7

Despite this, England's schools, particularly at secondary level, have embraced ability grouping to an unusual extent by international standards. In maths, where the practice is most prevalent, the 2013 PISA study found that 94 percent of England's students were grouped by ability compared with an OECD average of 51 percent. In Japan the equivalent figure was 46 percent, yet Japan has consistently outperformed the UK in maths, ranking 7th, compared to the UK's ranking of 26th. Furthermore, PISA shows how in Poland, during the 10 years from 2003 when ability grouping in schools was deliberately reduced, mathematics performance improved at an annual rate of 2.6 points, moving from a below-OECD-average score of 490 in 2003 to an above-OECD-average score of 518 in 2012.[148.]

Overall, the OECD's 2013 PISA study found that education systems that: "group students, within schools, for all classes based on their ability,

145. Barlow, H. (2017) Guest blog: The assumptions and impact of structured ability grouping. *UCL Grouping Students* blog, [blog] 1 February, Available at: blogs.ucl.ac.uk/grouping-students/2017/02/01/guest-blog-the-assumptions-and-impact-of-structured-ability-grouping/

146. Wiliam, D. (2001) *Reliability, validity, and all that jazz*. Education, Vol.29. Issue 3. Available at: eprints.ioe.ac.uk/1156/2/Wiliam2001Reliability3long.pdf

147. Ibid.

148. National Education Union (n.d.) *Setting and Streaming,* NUT section. Available at: https://www.teachers.org.uk/edufacts/setting-and-streaming

tend to have lower performance across all participating countries and economies, after accounting for per capita GDP."[149.]

One of the mission-oriented schools I visited that decided to base its practice on the evidence, is Reach Academy in Feltham.

That Reach should choose to do so is fascinating because mixed ability teaching is often criticised for contributing to 'dumbing down' – for making all students move at the pace of the slowest. Yet it would be hard to find a school anywhere in the country with higher expectations for its students than Reach. Here's Ed Vainker, the school's headteacher, explaining why he doesn't set or stream his students:

> "We are committed to mixed ability teaching across the school. All of the evidence suggests that mixed ability is the right approach but it needs strong teaching and pupils who are able to work independently. We believe in it because of its impact on our school's culture and the message it sends that every child is capable of academic excellence."[150.]

This confidence in the capability of all his students, regardless of their prior attainment or their background, is rooted in Vainker's personal experience of what, with sufficient support, so-called lower ability students can achieve (an astonishing 96 percent of his GCSE students achieved a Level 4 or higher in both English and maths this year). It is also supported by changes in the way we think about intelligence and academic ability. Here is UCL's Professor Hallam again:

> "Underlying policies related to streaming and setting are fundamental assumptions about the nature of intelligence. Historically, IQ was viewed as genetically determined and immutable. Recent research has challenged this view showing that almost no genetic polymorphisms have been discovered that are consistently associated with variation in IQ in the normal range. Malleability in IQ has been demonstrated by adoption studies and neuroscience has provided extensive evidence of the brain's plasticity. Increasingly, the development of self-regulatory and other non-cognitive skills is seen as important in developing high level intellectual capacity. Particular attention has been given to the concept of mindset. Individuals holding an 'entity' mindset believe that IQ is fixed and cannot be altered whereas those with an 'incremental' mindset believe that they can increase their abilities through effort. Mindsets influence the way that individuals learn. Those holding entity beliefs have lower self-efficacy, are more likely to give up when facing difficult tasks, and adopt ineffective strategies which are reflected in neural responses in coping with failure and negative feedback. Research has shown that mindsets can be changed when learners are taught about the neuroplasticity of the brain and its potential for change and re-organisation. Small changes in mindset can have a substantial impact on attitudes and motivation for learning."[151.]

149. OECD (2013) PISA *2012 Results: What Makes a School Successful? – Resources, Policies and Practices*. OECD Publishing: Volume IV, pp. 81-83
150. In correspondence with the author
151. Hallam, S. (2017) Guest blog: The assumptions and impact of structured ability grouping, *Best Practice in Grouping Students* [blog]. Available at: blogs.ucl.ac.uk/grouping-students/2017/02/01/guest-blog-the-assumptions-and-impact-of-structured-ability-grouping/

The idea of an 'incremental' or 'growth' mindset having a positive impact on educational performance was first put forward by American academic Carol Dweck, and is supported by the findings of several studies.[152] One found that 7th grade students in the US who agreed with the idea that "you can always change how intelligent you are" outperformed similar peers in the same school who believed that "you have a certain amount of intelligence and you can't do much to change it", and the gap in performance grew over time.[153] Another study found that using university student mentors to teach pupils about their ability to grow their intelligence led to large improvements in standardised tests.[154] And a third found that mindset is a greater predictor of academic performance than intelligence (as measured by IQ).[155] But there is a growing body of evidence that points to the opposite conclusion, the latest of which found: "no evidence to support the notion that holding more of a growth mindset results in greater academic persistence… nor that intelligence is consistently associated with mindset."[156] As with other performance-enhancing character traits and attitudes, the effect that having a 'growth' or 'incremental' mindset has on intelligence and academic achievement remains highly contested.

Whether or not UCL professors Hallam and Francis are right to attribute the negative impact of setting and streaming to mindset effects, doesn't change the fact that there is little evidence to suggest that, at the aggregate level, students at different levels of attainment benefit from being taught separately. That said, mixed-attainment teaching only works if it is skilfully differentiated to provide the right amount of stretch and challenge for everyone in the class. As Tom Sherrington sets out in a recent blog post, this involves:

> "A deliberate shift in attitude. Too often teachers' concerns about the struggles of weaker learners lead to content being softened; this is no good for top-end challenge… teachers should plan activities based on the capabilities of the highest attainers as a total priority… Providing appropriate scaffolds for other students flows from this but teachers need to have the courage and confidence to challenge at the top end, relentlessly."[157]

As to how to provide that challenge, the key, according to Sherrington, is rigour. Walk into a great lesson, he notes, and that is what you will always find – probing questioning that demands extended or highly

152. Dweck, C. S. (2006) *Mindset: The new psychology of success*. New York: Random House; Dweck, C. S. (2012). *Mindset: How you can fulfil your potential*. Constable & Robinson Limited

153. Blackwell et al. (2007) Implicit Theories of Intelligence Predict Achievement Across an Adolescent Transition: A Longitudinal Study and an Intervention, *Child Development* Vol. 78, No. 1, pp. 246 – 263.

154. Kornilova T.V. (2009) Academic Achievement in College: the Predictive Value of Subjective Evaluations of Intelligence and Academic Self-concept. *Psychology in Russia: State of the Art* Vol. 2, pp. 309-326. Available at: psychologyinrussia.com/volumes/index.php?article=1498

155. Ibid.

156. Brooke N. Macnamara, Natasha S. Rupani. (2017) *The relationship between intelligence and mindset*. Intelligence, 64: 52 DOI: 10.1016/j.intell.2017.07.003

157. Sherrington, T. (2017) Teaching to the Top: Attitudes and strategies for delivering real change. *Teacherhead Teaching and Learning* blog, [blog] 28 May, Available at: teacherhead.com/2017/05/28/teaching-to-the-top-attitudes-and-strategies-for-delivering-real-challenge/

precise answers; a culture of intellectual challenge and counter-challenge; teachers and students going deeper into a subject or veering off to explore interesting tangents; an insistence on the accurate use of subject-specific language; high and rising expectations of students' attention spans, independence, maturity and sophistication; the use of exemplars of excellence so students know what to aim for; opportunities for independent or 'flipped learning' (where students are asked to undertake tasks in preparation for a lesson); the use of speeches, presentations and exhibitions which demand excellent or beautiful work; and, throughout, an atmosphere of serious endeavour in which students are engrossed in challenging tasks and motivated, not by "having a bit of fun", but by making progress through difficult terrain.[158.]

Doing all of this in mixed attainment classes is, of course, more challenging than doing it in a top set or a grammar school. It requires teachers to teach in a differentiated way.

As Sir Kevan Collins, the Chief Executive of the Education Endowment Foundation put it this autumn:

> "Schools are right to ensure that their pupils are appropriately stretched but it is important that schools and teachers focus on the evidence. If they continue to group pupils by ability, they must monitor carefully the impact that it has on all their pupils. Good teachers can stretch and support pupils in one class who are years apart in their academic development"[159.]

The trick, according to David Didau, is to "teach to the top while supporting at the bottom." But there is a fine line between the sort of differentiation that recognises different students need different levels and types of help to reach or exceed the expected standard, and the sort that is code for low expectations – the belief, usually unconscious, that the less able should be given less challenge so as to bolster their self-confidence. Good differentiated teaching, Didau sums up, is about "setting the same bar but providing different ladders."[160.]

Supporting struggling and vulnerable students
Providing ladders is precisely what the team at Reach do every day, as they work to ensure that, in the journey to the summit, no one gets left behind. As Vainker explains:

> "Teaching mixed ability supports an aim of all pupils achieving mastery. It requires careful differentiation and timely support where pupils struggle to meet the learning objective. Across the school we use the Maths Mastery curriculum approach and in lessons teachers identify pupils who have struggled to meet the objective. These pupils are given additional support before the next lesson to ensure that they remain on track."[161.]

158. Ibid.
159. Robertson, A. (2017) Mixed-ability classes barely exist in schools, researchers find, *Schools Week* [blog] Available at: schoolsweek.co.uk/mixed-ability-classes-barely-exist-in-schools-researchers-find/
160. Didau, D. (2014) Practical differentiation: high expectations and the art of making mistakes, *The Learning Spy* [blog]. Available at: www.learningspy.co.uk/featured/differentiation-really-matters/
161. In correspondence with the author

But what goes on in the classroom is only a fraction of what Reach does to help their students fulfil their potential. Inspired by the Harlem Children's Zone in New York, Reach's co-founders see themselves not just as educators, but as agents of social regeneration, with the school providing a hub from which to engage the wider community. As Vainker puts it: "We believe that as a school if we can support the whole family in a way that supports the child's development then we must do it, even if it is not traditionally the school's role."[162.]

By way of elucidation, he offered the following anecdote:

"Shortly after our school opened in 2012, I visited the home of a boy about to start Reception. He was four but had no language, he could only grunt. There were no toys in his home, only a large TV screen. Within a week our family support worker had invested £100 in toys, then spent two hours a week showing his family how to play together. In addition to the support we offered the pupil in school, we supported mum to improve her English, helped her into adult education, invited her to a parenting course and ensured that she attended playgroups with her younger child. After interventions that we estimate have cost us £10,000 per year for five years, he has caught up in maths and is close to doing so in reading. His younger sister, meanwhile, exceeded the Early Learning Goals, passed the Phonics Screen just last week and is flying. We believe that early and holistic support can have a massive impact. This example is just one of many. We intend to build on it over the coming years and intend to work with parents from pregnancy onwards."[163.]

This spirit – of educational ambition, backed up by a can- and will-do social entrepreneurialism unbounded by conventional definitions of what a school is and is not there to do – is something I encountered in all the most high-achieving yet inclusive schools I visited. Like Ashgrove Primary in Macclesfield, a school that, under the inspiring leadership of Heather Jackson, supported by her tireless colleagues, has gone from the brink of closure to "the outstanding school and beacon for the community it now is" to quote from their last Ofsted report.[164.] Serving a community of much higher than average deprivation, where many children arrive at nursery with language skills well below the age-expected level, the school has its work cut out. Nonetheless, as the inspectors note:

"By the time children leave Reception, they think for themselves in order to find their way around problems, talk to each other, tackle reading and writing confidently and work securely within the expectations typical for their age in all of their activities… There is no slackening of pace in Years 1 and 2. Teachers' high ambition for their pupils continues to raise standards. Standards in reading, writing and mathematics are above average, having risen year on year… The picture is the same in Years 3 to 6, where progress for all pupils is rapid… Pupils funded through the pupil premium achieve much better than that group nationally in all subjects…

---

162. Ibid.
163. Ibid.
164. Ofsted (2013) *Ash Grove Primary and Nursery School*. London: Ofsted

Disabled pupils and those with special educational needs make exceptional progress… Excellent relationships are fostered and pupils' personal development is nurtured by every member of staff."[165.]

And the secret?

According to Jackson, "the total commitment of my staff and a lot of hard work" and a culture which encourages all members of staff, regardless of job title or status, "to give things a go." To risk failing, in other words. And to learn from failure, as well as success, so that, experiment by experiment, the school improves it practice and its performance.[166.]

Another school I visited that, like Ashgrove, doesn't at first blush appear particularly unusual but which is also achieving some unusually impressive things, is Broadford Primary School in Romford. Under the leadership of Malcolm Drakes, Broadford has gone from 'Inadequate' to 'Outstanding', its journey culminating in the honour of TES "primary school of the year" in 2017.

When Professor Michael Young described the purpose of schooling as: "enabling young people to acquire the knowledge that, for most of them, cannot be acquired at home or in the community", he was probably thinking about the mysteries and marvels of the canon – the best that has been thought or said.[167.] At Broadford in RM3, where life expectancy is four years lower than it is in the adjacent postcode, it can mean something as simple as jumping in a puddle or catching a leaf. Indeed, exploring some nearby woods is one of 48 experiences that the school ensures every child receives, at a rate of six per year, by the time they leave, with visits to every major gallery and museum in London also on the list. A love of reading is instilled early on with regular trips to the nearest Waterstones – a shop many of the children would be walked straight past at the weekend – and with visits from famous authors, illustrators and poets. Stories are brought to life through performance, with the Multi-Story Theatre Company taking up residence in the school for a week each year, and pupils taking part in events like Primary Proms at the Royal Albert Hall or a musical performance of popular children's books with the London Symphony Orchestra at the Barbican Centre.

By creating a 'school without walls' – by introducing his children to every wonder that London and the surrounding countryside have to offer – Broadford has instilled in its pupils a love of learning that makes the rest of its task relatively straightforward. But more than anything, it has done this by creating an environment where children – and particularly the most vulnerable children – feel safe, valued and cared for. As I toured the school with Malcolm, children of all ages would come bounding up to him, demanding a hug or the chance to share their latest news, experience, discovery or enthusiasm. And that, ultimately, is the secret of Broadford's success. Children there feel loved. And as a result, they love being there.

The importance of human relationships to a great school is underlined by the shocking statistics about what appears to be a growing problem of child and adolescent mental ill-health. According to the Children's

165. Ibid.
166. In communication with the author (November 2016)
167. Young, M. (2011) What are schools for? *Educação, Sociedade & Culturas* No. 32, pp. 145-155. Available at: www.fpce.up.pt/ciie/revistaesc/ESC32/ESC32_Arquivo.pdf

Commissioner's report of July this year, 805,950 children and young people aged five to 16 suffer from a mental health disorder – a number that broadly tallies with the much cited statistic from 2004 that one in 10 school children (three per class) has a diagnosable mental health condition.[168] While it is entirely possible that greater awareness and concern about mental health and wellbeing have led to an increase in the identification and reporting of such conditions, there are also reasons to believe that changes in pupils' home and school environments are exacerbating the problem. In a recent survey by The Key, 93 percent of school leaders expressed the view that children are battling a greater range of pressures than five years ago, with exams (and the burden of school expectations around exams) and social media the two biggest.[169] A recent study by The Children's Society, which focused on children aged 10 to 17, reported that increasing numbers of young people are turning to self-harm with hospital admissions over the last five years rising by almost 93 percent among girls and 45 percent among boys. There are also more young people considering suicide and an increasing number of young people treated for eating disorders.[170]

Regardless of the precise rate, or rate of increase, of mental health problems among school children, one thing is clear: the ability of the specialist statutory authorities to meet the demand for mental health services is diminishing as budgetary constraints, after 10 years of austerity, tighten. CAMHS (Child and Adolescent Mental Health Services), whose funding equates to 0.7 percent of the total NHS budget and just 7 percent of the mental health budget, are currently turning away 25 percent of children and young people referred to them, with those it doesn't turn away required to endure long waits both for assessment and treatment, during which time their needs often intensify.[171]

This perfect storm – of rising demand for, and reduced provision of, specialist mental health services – has inevitably led to schools having to pick up the pieces. Which is why the RSA, advised by mental health charities Young Minds and Place2Be, has embarked on a year-long trial, independently evaluated by the Anna Freud Centre, delivering basic mental health training to every one of the c. 600 adults – non-teaching as well as teaching staff – working in the seven West Midlands academies the RSA sponsors. Such programmes recognise a fact that every classroom teacher in the country knows: that before the wider discussion about curriculum, pedagogy and assessment even becomes relevant, children and young people need to be in a state of mind where learning is possible.

4.4.2 Building a networked school

At the request of then Secretary of State for Education Nicky Morgan, Dr Paul Cappon, a Canadian educationalist, wrote a report entitled

168. Children's Commissioner (2017) *On Measuring the number of vulnerable children in England*. Available at: www.childrenscommissioner.gov.uk/wp-content/uploads/2017/07/CCO-On-vulnerability-Overveiw.pdf

169. The Key (2017) *Spike in child mental health issues during exams*. [online]. Available at: www.thekeysupport.com/about/media-press/child-mental-health-issues-exams/

170. The Children's Society (2017) *Supporting children's wellbeing and mental health in a school environment*. Available at: www.childrenssociety.org.uk/sites/default/files/westminster-hall-debate_mental-health-and-wellbeing-support-in-schools-.pdf

171. Ibid.

Preparing English Young People for Work and Life: An International Perspective.[172.] The hope was that he would provide an outsider's view of the strengths and weaknesses of the English system that would identify, and shine a light on, trends and problems British observers might not see or wish to highlight.

Having noted how unusually strong is the link between poverty and educational underperformance in this country, Cappon delves deeper, asking why it is that:

> "indigenous young people of white race and British ethnicity, particularly in the working class outside London, are in large number among the learners left standing on the platform as the educational train leaves the station", before musing: "it is unclear whether unrelenting expression of 'political correctness' in England is impeding adequate responses to the entrenchment of this tendency."[173.]

This issue – of the demoralisation and cultural alienation of the white working (and non-working) class, and their sense of abandonment by a metropolitan professional and political class – is what led directly to the growth of anti-immigrationism, protectionism and populism on both sides of the Atlantic and is, in many ways, the defining economic, social and political challenge of our times. You don't need to make any judgement about the relative strength of the arguments for and against the United Kingdom leaving the European Union to note that, in the 2016 referendum, support for Brexit correlated strongly with the holding of low or no educational qualifications.[174.] Those who most wanted to "take back control" – the Vote Leave campaign slogan – were those who were least equipped to prosper in a competitive, knowledge-based global economy, their lack of education and skills having fed a growing sense of powerlessness.

Here's Cappon again with a highly revealing anecdote from a visit to Grimsby which speaks to this exact issue:

> "In 1970, at the peak of the indigenous fishery at Grimsby, 400 English trawlers plied between that harbour and fish stocks in the North Atlantic. Today, as reported in local guidebooks, there remain only 5 of these. In fact, during a recent tour of the harbour, the sole vessel glimpsed was disposed in front of the fishery museum as a reminder of days gone by.
>
> The demise of the fishery in Grimsby and other areas of the north east represent an important reason for its decline and for the economic stagnation and relative poverty that characterises it today. Yet Grimsby continues as the largest processing station of fish in the country, the catch being brought into the town primarily by Icelandic trawlers. A visitor's first question is a most obvious one: how could this be? How is it possible that there are no fish left in the sea for English fishermen, yet plenty for others?

172.   Cappon, P. (2015) *Preparing English Young People for Work and Life. An International Perspective.* SKOPE Policy Paper No 3, September 2015. University of Oxford. Available at: www.skope.ox.ac.uk/wp-content/uploads/2015/09/Paul-Cappon-Preparing-English-young-people-for-work-and-life.pdf

173.   Ibid.

174.   Zhang, A. (2017) New Findings on Key Factors Influencing the UK's Referendum on Leaving the EU. *World Development.* Available at: doi.org/10.1016/j.worlddev.2017.07.017

From an education standpoint, the issue becomes: why are there so few, including those involved in presenting history, who can or wish to explain this phenomenon? Guidebooks merely state that 'England lost the cod wars to Iceland'. Even in the excellent fisheries museum, no answer is advanced to this most cogent of questions, pressing because it is so central to the current state of economic and social affairs in the locality.

In the successful academy school in Grimsby, the question was put to four 17-year-old students, all completing their A-levels this year. Remarkably, all four bright and eager students had grandfathers who had worked in the moribund English fishery; yet none had an answer to this question – even though the loss of the fishery had exerted such a profound and direct influence on their lives and on those of the community as a whole, since it lies at the heart of its current economic deprivation. From a psychological perspective, it seems clear that people adjust better when they can develop an understanding of circumstances and forces that brought them to their current condition. It is crucial that young people especially understand that it is not due to their failings or those of their parents and grandparents that they must struggle to succeed against the odds. It becomes a matter of self-regard and of confidence in oneself and in one's society and community.

For these reasons it is probable that, in most countries of the OECD, exposition of this aspect of local history would be paramount in both formal and informal learning settings – in schools and in museums and other public spaces. General awareness of these forces would be likely and would assist in encouraging young people especially to possess characteristics of resilience and inquiry that are critical to success in life and work."[175.]

Explaining why this might be, Cappon continues:

"Teachers in various regions have explained that local history is not essential to a good Ofsted rating and that, therefore, the observation in Grimsby is far from an isolated example; that the national history curriculum, through time pressures inherent in its requirements, discourages a focus on local history. Yet it is an understanding of local geography and history that helps young people understand their origins, their place in the world – and therefore to take an interest in social science more broadly, as well as to develop pride in achievement through the accomplishments of their ancestors.

A second possible explanation relates to a fatalistic attitude in regions of the country that have low aspiration in the aftermath of de-industriali-sation or other economic traumas in the recent past. In such areas, decline may be perceived as obviating explanation. This attitude is then reflected into educational and cultural institutions locally: failure may be seen as a simple fact of life not requiring explanation. In this case, low aspiration among students becomes more comprehensible."[176.]

175.   Cappon, P. (2015) *Preparing English Young People for Work and Life. An International Perspective.* SKOPE Policy Paper No 3, September 2015. University of Oxford. Available at: www.skope.ox.ac.uk/wp-content/uploads/2015/09/Paul-Cappon-Preparing-English-young-people-for-work-and-life.pdf
176.   Ibid.

Although Cappon focuses on local history and geography, the point he makes is surely a wider one: that the education we are providing our children is too disconnected from the world it is designed to prepare them for, and that the schools in which that education is delivered are too cut off from the communities in which they are located. This isn't an argument for sugar-coating serious academic content to give it a greater sense of contemporary relevance. Quite the reverse. It is an argument for explicitly linking the lessons of the past to the challenges of the present so as to prepare young people for the future. And for doing so by throwing open the school gates and engaging with the world outside.

What does this mean in practice?

First and foremost, it means a school committing to educate its students in partnership with their parents. Although this sounds obvious, it is surprising how little some schools do to get parents actively involved in their children's learning, with some – particularly those in deprived parts of the inner city who see it as their job to 'rescue' young people from the troubles in the community – viewing parents not as part of the solution, but the problem.

Yet, as a 2011 DfE review of parental engagement undertaken by Janet Goodall concludes:

> "Parental engagement has a large and positive impact on children's learning. This was the single most important finding from a recent and authoritative review of the evidence. Parental involvement… has a significant positive effect on children's achievement and adjustment even after all other factors shaping attainment have been taken out of the equation. In the primary age range, the impact caused by different levels of parental involvement is much bigger than differences associated with variations in the quality of schools. The scale of the impact is evident across all social classes and all ethnic groups."[177.]

What is less clear, as research by the Nuffield Trust and a review of the evidence by the EEF both show, is precisely how schools should encourage parental engagement and the form that engagement should take, with many interventions found not to deliver their intended benefits.[178.]

Building a networked school also means preparing students for the world of work, not by providing the occasional underwhelming careers talk, but by plugging them directly into local businesses and employers with job 'taster days' and work placements that give them the chance to undertake real tasks of real value to real organisations. It means developing relationships with colleges and universities that give teenagers a glimpse of what non-compulsory study involves; what it means to join a community of interested and interesting people, pushing the boundaries of their own, and our shared knowledge and expertise. It means jumping

177.   Goodall, J. (2011) 'Review of best practice in parental engagement: practitioners' summary', DfE, 2011

178.   Gorard, S. and See, B. (2013) 'What do rigorous evaluations tell us about the most promising parental involvement interventions? A critical review of what works for disadvantaged children in different age groups', Nuffield Trust; and the Education Endowment Foundation's teaching and learning toolkit: parental involvement. Available at: educationendowmentfoundation.org.uk/resources/teaching-learning-toolkit/parental-involvement/

off the revolving carousel that secondary schools use to give 11 to 14 year olds a brief introduction to different forms of design and technology and showing students what they look like in the real world, introducing them to inventors and manufacturers, programmers and coders, engineers, designers and architects. It means saturating them in art and culture and opening their eyes to the countless employment opportunities that exist in the creative industries. And it means giving them a taste of public and community service; an insight into the life of a doctor or a nurse, a politician or civil servant, a social entrepreneur or charity worker.

But most of all, it means giving them the sense of agency and creative possibility that come from realising how limitless are the ways to find and create value in an open economy and a free society.

4.4.3 Building a deliberately developmental school

Although School 21 felt highly innovative when I visited, Peter Hyman, its headteacher, remains unconvinced.

> "When I look at different school models around the world, and particularly in the US – at their 'micro schools' and specialist schools, at 'City-As-School' in New York, or High Tech High or the Big Picture schools – and then look at my own school, what we're doing doesn't feel particularly radical."[179.]

That may be true in some respects. But there is one thing Hyman has done that, though largely invisible to the outsider, is genuinely radical. He has created what he calls a "deliberately developmental organisation" (a DDO), a phrase borrowed from the book *An Everyone Culture* by Robert Kegan and Lisa Laskow Lahey.[180.] The book, which focuses on three exemplar private sector companies, is based on a simple insight: that in most organisations employees have two jobs. The first is the one they were hired to do, which is detailed in their job description and which usually corresponds to a reasonable degree to their skills and strengths. The second one, which no one has asked them to do, but which they nonetheless feel compelled to do, is to cover up, or find ways of working around, their weaknesses and skill-deficits – the things they never learned or find difficult. Not only does this second job take up huge amounts of each employee's time – time that could be spent more productively – but it leaves their weaknesses unaddressed. And since these fixable weaknesses represent the company's growth potential, this has obvious and damaging consequences for productivity.

But building a deliberately developmental organisation isn't easy. It requires leaders to create a culture that both challenges and helps people to develop and grow. And since this requires them first to come clean about their shortcomings or inadequacies, this requires the building of a trustworthy, safe and supportive environment. Finally, it involves incorporating development processes and routines into the everyday life of the organisation.

179.   In conversation with the author (December 2016)

180.   Kegan, R., Lahey, L. and Miller, M. (2016) *An everyone culture.* Boston, MA: Harvard Business Review Press

Here's Hyman on how he has sought to do this at School 21:

"The starting point is that teachers should not just be exam fodder, de-professionalised and demoralised. Teaching should be restored to the layered, intellectual, complex, challenging, invigorating profession that it is. At School 21 we believe in a staffroom filled with opinionated, thoughtful teachers, not yes people carrying out the rigid model of the leader. This is the fundamental flaw of some schools – including some mission-oriented schools. There is little room for dissent, for multiple opinions, for genuine open mindedness.
We recruit people based on four attributes:
    Pioneer – people who want to change the way education is done
   Craftsman – those who think deeply about the craft of teaching
    Multiplier – those who build capacity and develop others
    Integrity and humanity – people with a sense of moral purpose and strong values
We have more planning days and two hours ring-fenced every Wednesday for professional development. Staff have personalised pathways for development. All teachers are teacher trainers who lead on different modules. We then make sure we develop them by giving them regular and specific feedback. We have circles and teams where every member of staff contributes to the strategic direction of the school.

We have a greater variety of progression routes – not just pastoral and academic in the traditional way – but also pedagogy leadership, people leadership (leading on people development) and school designers who develop the curriculum. There are opportunities for primary and secondary to collaborate in ways they wouldn't usually. And all members of staff produce a portfolio/presentation of their growth and learning during the year – what we call craft reviews."[181]

Culture Flow
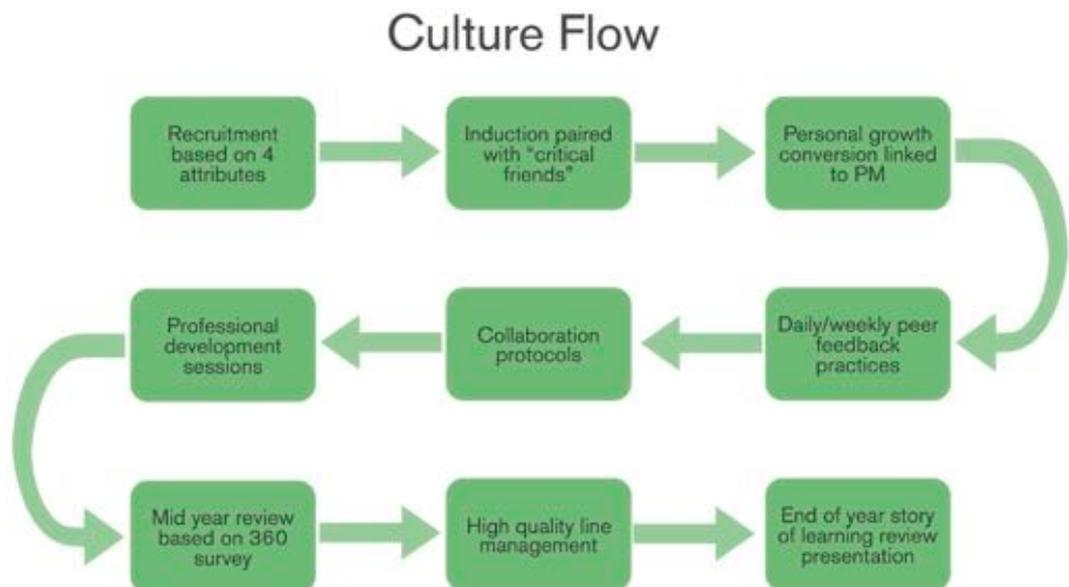
181. In correspondence with the author.

And as with the School 21 jigsaw that sets out the design principles by which the school's high-level vision is translated into a practical project, so too these practices and protocols have been mapped out to ensure that their shared purpose – that of building a deliberately developmental organisation – is reflected in the lived reality of every teacher in the school.

While School 21's developmental culture and processes are particular to that school, all the successful mission-oriented schools I visited are places where staff are determined to improve and the school is determined to help them. What is more, they are places where the quest for professional growth and development is constant, not something that gets done in time limited slots labelled 'Continuing Professional Development'.

Part Three

Chapter 5: Calling time on the game

If we want more mission-oriented schools that put education's ultimate goals before the proximate goal of exam success; if we want more school leaders who are able consistently to put the educational and developmental interests of their students before the institutional interests of their school; if we want more different types of school, pursuing different missions, leading to a more diverse system that offers more meaningful choices to parents; if we want a genuinely self-improving system where schools work collaboratively to help each other as well as themselves; and if we want to see more innovators and pioneers, prepared to challenge received wisdoms and established practices, we first need to reform the existing system that, at almost every turn, encourages the opposite.

But before thinking about what that reformed system might look like, it is worth recording how we got here; how, over the last few decades, centralised administrative accountability (performance targets and inspection) came to play such a powerful role in the effort to raise school standards relative to local democratic accountability (the oversight of elected councils) and market accountability (parental choice and voice).

5.1 The road to hyper-accountability

In the post war decades, central government had little to do with what happened inside England's schools. Schools were visited by local authority inspectors and occasionally by one of the small number of Her Majesty's Inspectors (HMIs) whose reports were for ministerial eyes only, but because children sat no national tests until they were 16 it was impossible to make comparative judgements about pupil progress and school effectiveness. Indeed, such was the opacity of the system that it became known as "the secret garden"; a place to which only teachers were granted access.[182.]

The change in public and political opinion that was later to open schools up to such intense external scrutiny can be traced back to events at the gates of William Tyndale School in the London Borough of Islington between October 1975 and May 1976. Throughout that winter, the school's predominantly working class parents protested at the heavy price they believed their children were paying for what they saw as a flawed experiment in progressive, child-centred teaching.[183.] It began a power struggle which brought into sharp relief the question of who controls schools. It also influenced Prime Minister Jim Callaghan's direction-setting 'Ruskin' speech in the summer of 1976 in which he first raised the question of school accountability and asserted that teachers were not the only group to have a legitimate interest in education.[184.] Despite this, significant change did not arrive until Margaret Thatcher's third term when, in 1988, her government introduced a national curriculum, regular national testing and national performance reporting. The accountability system was further strengthened four years later by John Major's government which created an independent national inspectorate, led by Her Majesty's Chief Inspector of Schools in England which later became the Office for Standards in Education (Ofsted).[185.] These two pieces of legislation put in place the institutional architecture of the accountability framework we have today and meant that, for the first time, performance could be measured and failure identified. This, combined with the publication of school league tables in the national press, was to have a profound impact on the national education debate.

But something else was happening too. By the late 1990s, influential thinkers in all three main political parties had become highly sceptical about the ability or willingness of some local authorities to act on the information they received about standards and to drive school improvement. In the London Borough of Hackney, for example, educational standards had fallen so far by the time Tony Blair came to power that more than half

182. The term "secret garden" was first used by Lord Eccles, Minister of Education, in 1960
183. Riley, K. (1996) William Tyndale 'nourished agenda'. [online] Tes. Available at: www.tes.com/news/tes-archive/tes-publication/william-tyndale-nourished-agenda [Accessed 13 Oct. 2017]
184. Callaghan, J. (1976) Ruskin College speech- full text online. [online] Educationengland.org.uk. Available at: www.educationengland.org.uk/documents/speeches/1976ruskin.html [Accessed 13 Oct. 2017]
185. Gillard D (2011) *Education in England: a brief history*. Available at: www.educationengland.org.uk/history [Accessed 13 Oct. 2017]

of all 11 year olds were travelling out of the borough every day to escape the fate of those (generally poorer children) educated in local secondary schools.[186.]

The New Labour government responded in two ways.

First, it began micro-managing schools in an attempt to tackle those instances of serious underperformance that the publication of comparative school data had exposed. Education Action Zones, Excellence in Cities, Fresh Start and the National Challenge all subjected schools to an unprecedented degree of central government interference. Emblematic of this trend were the National Strategies, which dictated to schools precisely how, and even for how long, to teach different subjects, with literacy and numeracy hours introduced, particular teaching methods prescribed and other detailed priorities laid down. But as Ofsted noted, schools "were often overwhelmed by the volume of centrally driven initiatives, materials and communications."[187.]

Second, it introduced a far-reaching structural reform – the academies programme – which allowed third sector providers to take over failing schools and run them outside of local authority control. In the early days, the programme delivered significant improvements, as the fast rising results of Hackney's schools, and the equally dramatic reduction in the daily exodus of 11 to 18 year olds from the borough, underlined. But as this did nothing to increase aggregate supply, and therefore nothing to increase parental choice, it had no positive impact on market accountability. By taking local authorities out of the picture, it significantly reduced local democratic accountability. And by effectively turning the Department for Education into a giant Local Education Authority (LEA) for academies, it massively increased the power of central government, and the importance of the administrative accountability tools (inspection and performance data) on which government ministers rely.

When there were just a couple of hundred academies, the DfE's task was just about doable. But as the number of academies has grown, the department has been forced to acknowledge its inability to exercise those functions from Sanctuary Buildings in Westminster. Eight Regional Schools Commissioners (RSCs), each supported by a Headteacher Board (HTB), were established to monitor standards and oversee the process of academisation and, when necessary, re-academisation (the passing of an academy from one Trust to another).[188.]

What has got lost in this largely unplanned, reactive process of system re-design, as former government advisor and consultant Robert Hill explains in his RSA report 'The Missing Middle', is the external support and challenge that the best local authorities used to provide.[189.] The system has been charged with self-improvement, with the highest

186. Coughlan, S. (2003) BBC News, Education, Parents' tough choices in London. [online] News.bbc.co.uk. Available at: news.bbc.co.uk/1/hi/education/3236044.stm [Accessed 13 Oct. 2017]

187. Ofsted (2010) *The National Strategies: a review of impact*. Manchester: Ofsted

188. Gov.uk. (n.d.) About us - Schools Commissioners Group - GOV.UK. [online] Available at: www.gov.uk/government/organisations/schools-commissioners-group/about [Accessed 13 Oct. 2017]

189. Hill, R. (2012) *The Missing Middle: The Case for School Commissioners*. The RSA. Available at: www.thersa.org/discover/publications-and-articles/reports/the-missing-middle-the-case-for-school-commissioners [Accessed 13 Oct. 2017]

performing schools and Multi-Academy Trusts (and the Teaching School Alliances they form and the National and Specialist Leaders of Education they employ), expected to drive that improvement. But with 'Outstanding' schools often situated in relatively high-performing areas where their support is needed least, and with those schools hugely disincentivised to help other schools by an accountability system that encourages them to think about their own performance above all else, many schools, particularly stand-alone academies and maintained schools whose local authorities no longer have the capacity to support them, have become dangerously isolated.

To mitigate the obvious risk of undetected institutional failure in a highly atomised system in which parental choice is limited and the local authority role denuded, the government and the inspectorate have sought to fill the gap, introducing new definitions of failure and taking on more powers to intervene in failing schools. The floor threshold has been progressively raised, a new 'coasting' category introduced, 'satisfactory' schools re-categorised as schools that 'require improvement', time limits for demonstrating that improvement imposed, and legislation requiring the automatic academisation of inadequate schools passed into law. And by continuing to distinguish not only between schools near the bottom of the performance distribution but those at the top – all of them desperate to acquire or retain the precious Ofsted 'Outstanding' label – our system of administrative accountability has come to exert an enormous influence over the priorities and practices of almost every state-funded school in the country.

So total is this influence, that the very language of the accountability system has now been internalised by schools. Where once governors' or senior leaders' meetings might have focused on curriculum and pedagogy, they now revolve around administrative targets and the tactics of how to meet them.

5.2 Back to the secret garden?

So concerned have some parents become by the impact of high-stakes accountability on character of the education their children are receiving that they came together under the banner "Let our kids be kids" to campaign for an end to standardised testing in primary school, with 40,000 of them keeping their children out of school for a day in the spring of 2016 in protest against SATs.[190.]

But while it is easy to sympathise with their complaint, there are reasons to worry about where their campaign might lead. After all, assessment is a critically important part of teaching. Teaching without assessment is to education what treatment without diagnosis is to healthcare.

The campaign's website does draw a distinction between formative and summative assessment, noting that: "These tests [SATs] replace good old fashioned teacher assessment and add nothing to the individual child's learning development."[191.] Again, there's a kernel of truth buried under that sweeping statement – namely that key stage 2 SATs are summative assessments and are more important to schools than they are to pupils. But the claim that old fashioned teacher assessment is "good" should not go unchallenged, and neither should the claim that SATs add "nothing" to a child's learning development. After all, if we want to know whether a school's teaching is effective and its teacher assessments accurate, we need standardised tests. And if we want to know whether, at the end of seven years of primary school, children possess the foundational knowledge needed to access the secondary curriculum, and where a secondary school should focus its remedial interventions if they do not, then we standardised tests.

What is more, the hollowing out of education described in Part 1 of this paper is not a result of testing per se. It is a result of the way in which schools prepare their students for tests, which in turn is a consequence of the purposes to which test results are put – that of holding schools to account for their performance, with punitive sanctions awaiting those deemed to be failing. In other words, it is a result of the accountability, not the assessment, regime.

But abolishing all forms of administrative accountability is no more attractive a proposition than abolishing standardised tests, not least because it implies a reversal of the trend towards transparency in public services. Why? Because as soon as you publish performance data – which parents now consider their right – the idea of not acting on them where they reveal instances of serious and chronic underperformance is unconscionable.

What is more, the accountability system does produce some significant benefits; it would have been dismantled long ago if it didn't. These

190.   Coughlan, S. (2016) *Parents in primary school test protest.* [online] BBC News. Available at: www.bbc.co.uk/news/education-36188634 [Accessed 13 Oct. 2017]
191.   Let Our Kids Be Kids. (2017) *Let Our Kids Be Kids.* [online] Available at: https://letthekidsbekids.wordpress.com/ [Accessed 13 Oct. 2017]

benefits were perhaps most starkly illustrated by Simon Burgess and his colleagues at the University of Bristol who looked at the effect of the Welsh government's decision not to publish school performance tables. By comparing the performance of Welsh and English schools in the years after Welsh performance tables were abolished, Burgess and his team were able to find:

> "Significant and robust evidence that this reform markedly reduced school effectiveness in Wales."[192.]

So, if we are not to set our face against the idea of testing children, publishing test data, and using test and other data to hold schools to account for their performance, what should we be doing to reduce the harm our system of high-stakes hyper-accountability is now doing to the education our schools are providing?

The answer is to carefully design, and cautiously implement, a number of changes – to policy, practice and culture – at every level, involving ministers, officials, inspectors, examiners, trustees and governors, school leaders and teachers.

The aim of those changes is to free schools from having to choose between their own interests and those of their pupils; to get teachers teaching to the curriculum, not the test; to get examiners to reward genuine quality rather than coached responses; to get Ofsted to look at how, as well as whether, a school has met its performance targets; and to get government and the inspectorate out of the business of defining excellence and focused solely on identifying failure; and, in everything they do, to ensure the actions of policymakers and regulators are more supportive and less punitive.

And, behind all these aims, is one over-riding objective: to help those who lead and teach in our schools take ownership of their institutions, their profession and their practice.

192.   Burgess, S.M., Wilson, D.J. & Worth, J. (2010) 'A natural experiment in school accountability: the impact of school performance information on pupil progress and sorting'. University of Bristol, CMPO

5.3 Improving assessment

Far-reaching as this reform effort must be, it starts at the point closest to the problem: with assessment, and the way it often impedes, rather than supports, learning.

To understand why that is, we need to return to the most basic question of all: what is assessment, and what is it intended to do?

Harvard Professor of Education Daniel Koretz answers that question with an analogy – to opinion polling. Just as pollsters use a sample of as few as 1,000 people to gauge the state of opinion across a population of several million he explains, so educational assessment – exams and other tests – feature a sample of questions from a much wider domain.[193]

And as with political opinion polling, which in the last two and a half years has failed to predict the outcome of the US presidential election, two UK general elections and the EU referendum, so educational assessment can provide inaccurate information. Here's Koretz:

> "In the same way that the accuracy of a poll depends on seemingly arcane details about the wording of survey questions, the accuracy of a test's score depends on a host of often arcane details about the wording of items, the wording of 'distractors' (wrong answers to multiple choice items), the difficulty of the items, the rubric (criteria and rules) used to score students' work, and so on…If there are problems with any of these aspects of testing, the results from the small sample of behaviour that constitutes the test will provide misleading estimates of students' mastery of the larger domain."[194]

So test design really matters. Get it wrong and the sample stops being a good proxy for the domain, and inaccurate inferences get drawn – about the extent of a student's presumed knowledge just as much as about the size of Theresa May's expected majority.

But even a well-designed test can provide inaccurate information about a student's domain-wide knowledge if the test is compromised, which is why cheating is such a problem. Koretz explains the point by reference to the US postal service which used a random sample of 1,000 addresses to check the speed of postal deliveries. Some workers found out the sample addresses and made sure that those addresses received a very speedy delivery. Those addresses did indeed receive a very speedy delivery, but the inference it allowed you to make about the domain (the entire postal service) was compromised, just as it would be if students were to see an exam paper in advance of the exam.[195]

In a review of Koretz's book *Measuring up: what educational testing really tells us*, Daisy Christodoulou explains how millions of young people in English schools are routinely taught in ways that invalidate the

---

193. Koretz, D. (2012) Measuring up: What educational testing really tells us. Johanneshov: TPB
194. Ibid.
195. Ibid.

inferences we are seeking to draw from their exam results. And how, at the root of the problem, lies the widely misunderstood distinction between the sample and the domain:

> "The point that Koretz is making… is that the domain is vast. It isn't just that the domain is bigger than the test… It's that the domain is even bigger than the syllabus. In fact, the domain is even bigger than the school curriculum. Second, the point Koretz is making with the postal service example is that if you teach to the test, then a pupil may well genuinely improve on those test items. But the point of a test score is not actually to tell you how well pupils have done on those particular items. The point of a test score is to allow you to make an inference about the wider domain. Here is the logic: the test is a sample from the domain. The syllabus is also a sample from the domain. In order for the test to provide a valid inference about how a pupil will perform on the entire domain, teaching must be geared towards the domain. If teaching is geared towards the test, that compromises the result. But even if teaching is geared towards the syllabus, that can compromise the result too."[196.]

Koretz goes on to describe six ways in which schools might prepare their students for high-stakes tests without resorting to cheating. The first three – teachers and students working for longer, working harder or working smarter – produce the genuine gains policymakers were hoping for when they introduced the tests. The other three, which he labels "reallocation", "alignment" and "coaching", usually do not. These three are the components – and the tell-tale signs – of teaching to the test.

Reallocation refers to taking time set aside for learning about other, untested elements of the domain. Alignment is when teaching is matched to the test syllabus. And coaching refers to focusing instruction on small details of the test, including many which have no substantive meaning.[197.]

On the question of whether teaching to the test, however manifested, can ever be completely eradicated, and on the related question of whether it matters so long as the test is a good one, Chistodoulou explains why her view shifted recently:

> "Koretz's argument is that because tests can only ever be samples of the domain, there is no possibility of an optimal test. There is no way we can measure the domain. Hence, all tests will be to some extent imperfect, and if a teacher tries hard to game them, they will be able to. I accept this. This is one way in which Koretz has genuinely changed my mind. I used to think that the problem of excessive test prep was one of badly designed tests. That is, I used to think that it was OK to teach to the test if the test was worth teaching to. Koretz takes on this exact point and shows that it is false. He's convinced me. Even the best test in the world is only a sample, and samples can be gamed."[198.]

196. Christodoulou, D. (2014) Why teaching to the test is so bad. *The Wing to Heaven* blog, [blog] 19 January. Available at: thewingtoheaven.wordpress.com/2014/01/19/why-teaching-to-the-test-is-so-bad/

197. Koretz, D. (2012) Measuring up: What educational testing really tells us. Johanneshov: TPB

198. Christodoulou, D. (2014) Op cit

Where Christodoulou differs from Koretz is over the degree to which this ineradicable problem can at least be reduced through intelligent test design and, in particular, through making exams less predictable and therefore less easy to teach to. But the ability of test designers to set unpredictable questions and tasks is, as she recognises, hugely constrained by the need for exams to be both *reliable* and *valid* – two key issues at the heart of assessment.

Reliability is about consistency across time, whereas validity refers to the accuracy of the inferences we draw from test results. Although it is possible to draw invalid inferences from a reliable test (as we would do by standing on a consistent but inaccurate set of bathroom scales), the reverse is not true; you cannot draw valid inferences from an unreliable test. So although validity is the thing we care about the most, it requires reliability. And reliability often leads to predictability, the key enabler of teaching to the test.

The relative weight you should attach to reliability and validity depends on what you are using the assessment to find out, and what you want to do with the information once you have it. Here, the key issue is *formative* versus *summative* assessment.

Formative assessment is designed to provide teachers with specific, actionable, diagnostic information about what students do and don't know, and can and can't do. Its aim is to identify useful next steps for students and teachers.

Summative assessment is designed to provide anyone who might have an interest – an academic seeking to understand the effectiveness of different educational approaches, a government minister wanting to hold schools to account for their performance, universities and employers looking to recruit new students or workers – with an accurate shared understanding of relative school or student performance. Which means it has to be highly reliable. And because it needs to be relevant to the real world concerns of the very many non-teachers who will use it, it needs to sample from a large domain.

The reason this distinction matters is that the high-stakes tests that drive school behaviours are summative tests, designed for summative purposes – to create a shared understanding of student and school performance across the system. This leads to two key problems. First, it encourages schools and teachers to aim their teaching at these tests, often using multiple past papers from the same test to help their students prepare, even though they aren't designed primarily to identify specific knowledge gaps or skill deficits that a teacher can then address; even though, in other words, they aren't designed primarily to support teaching and learning. And second, because the actual purpose for which summative tests are designed is to allow for meaningful comparison, and because those comparisons are often used to make life-changing decisions (like whether a student goes to university, or a school is deemed to be failing) they have to be reliable and consistent. And since reliability and consistency often lead to predictability, such tests are particularly vulnerable to gaming.

So what are the solutions?

Broadly speaking, they fall into two categories: reforms to assessment designed to limit the opportunities to teach to the test, and a wider effort

to educate practitioners and policymakers about the different forms and purposes of assessment and, crucially, about the negative consequences of teaching to the test. The objective here is to bring about a profound cultural shift within the profession to encourage teaching to the domain rather than the sample, to put the curriculum at the centre of teaching, and to embed frequent, no-stress formative assessment in everyday practice.

5.3.1 Making tests harder to teach to

The first task, that of making summative tests harder to teach to, starts with exam boards attending to what Koretz calls the "arcane details" of test design to make them as unpredictable, non-leading and non-formulaic as possible without sacrificing reliability and validity.[199.] The gains from such efforts will be marginal and incremental, as assessors work to make each year's exam slightly better than the last, but that doesn't take away from their importance.

But it is also about getting the balance right between different types of test and making good decisions about when to use each.

Many people, particularly those who worry about the stress that high-stakes exams can put children under (like 'Let our kids be kids'), argue for more work to be assessed by teachers on the grounds not only that this is less stressful, but that it also leads to more detailed, nuanced and informed judgements being made. More accurate, in other words. The problem is this isn't true.

As Professor Rob Coe of Durham University has shown, and a large number of other academic studies and trials have confirmed, teacher assessments tend to discriminate against particular groups of students, such as those with special educational needs and/or behavioural problems, poor students, those for whom English is an additional language and those whose personality differs from the teacher's.[200.] What is more, they tend to reinforce stereotypes, such as boys being better than girls at maths. That this is the case is a result of unconscious biases, which afflict teachers no more than any other human. But unconscious biases are still biases, and their effect is to render teacher assessment less fair, and less fair to disadvantaged pupils in particular, than written tests.

But written tests also vary enormously. One key difference is between those based on the 'quality model' and those on the 'difficulty model', a distinction that Ayesha Ahmed and Alastair Pollitt at the University of Cambridge draw out by reference to two different sports, which pick their champions in very different ways:[201.]

> "Competitive ice dancing uses a pure quality model. All ice rinks are equally flat and roughly the same size, shape and temperature; in other words the task is pretty much the same in every ice dance performance.

199. Koretz, D. (2012) Measuring up: What educational testing really tells us. Johanneshov: TPB

200. In Christodoulou, D. (2017) *Tests are inhuman – and that is what is so good about them*. [online] The Wing to Heaven. Available at: thewingtoheaven.wordpress.com/2015/10/11/tests-are-inhuman-and-that-is-what-so-good-about-them/ [Accessed 13 Oct. 2017]

201. Ahmed, A. and Pollitt, A. (2010) The support model for interactive assessment. *Assessment in Education: Principles, Policy & Practice* 17(2)

The skater is expected to go out and perform in a way that impresses the judges as much as possible. In contrast, a high jump competition is a clear example of the difficulty model, consisting of a series of tasks of ever increasing difficulty which continues until everybody has failed. In the ice dance we focus on judging the responses, while in high jump we focus on counting successes on the tasks."

On the whole, we tend to use the difficulty model to judge performance in subjects where proficiency can be measured through questions to which there are right and wrong answers – maths and science for example. So long as the test includes enough questions of moderate difficulty so most students don't end up either getting all of them right or all of them wrong, such tests are highly effective at distinguishing between students of different abilities.

The quality model, on the other hand, is more often applied to subjects like English literature, the humanities and the arts where there are fewer right or wrong answers and where excellence can take different forms.

From an assessor's perspective, the hard part in the difficulty model is the design of the test, whereas the challenge in the quality model – and the place where its reliability and validity often break down – is in the marking.

Since the quality model is based around open questions and extended written responses like essays, marks tend to be awarded according to how closely an essay matches a set of criteria, usually set out in the form of prose descriptors or rubrics. This, as Christodoulou explains, is highly problematic:

"Take writing as an example. Teachers know what quality writing is, and when given examples of writing, teachers tend to agree on the relative quality of the examples. But it is fiendishly difficult to articulate exactly what makes one piece of writing better quality than another, and still harder to generate a set of rules which will allow a novice to identify or create quality. Sets of rules for creating quality writing or quality anything can descend into absurdity.

For example, I often read essays which have been quite obviously written to the rules of a PEE paragraph structure: "In this poem, the poet is angry. I know he is angry because it says the word 'anger'. This shows me that he is angry."

Or, at A-level, I have read essays where pupils repeat chunks of the assessment objectives, as if to flag up to the examiner that they are ticking this particular objective: "In The Darkling Thrush, Hardy uses an unusual form to shape meaning. He also uses a different structure and his language is very interesting, and overall, the form, structure and language shape meaning in this literary text."

Or, more commonly at primary, writing where every sentence begins with an adverbial word or phrase which barely makes any sense: "Forgettably, he crept through the darkness."

I think the absurdity here results from pupils having been given a rule or maxim which is of some help but which will not on its own create quality. Generally, it is a good idea to use evidence and explain your reasoning, to comment on form, structure and language, and to use

adverbial sentence openers. But without concrete examples of how such rules operate in practice, they are of very limited value. And this is the problem with criteria and rubrics: they are full of prose descriptions of what quality is, but they will not actually help anyone who doesn't already know what quality is to acquire it. Or, in Rob Coe's words, criteria "are not meaningful unless you already know what they mean."[202.]

One way of getting round the problem of descriptors and rubrics which, as we have seen, can reward stereotyped and formulaic writing while punishing original and brilliant writing that happens not to tick the boxes in the mark scheme, is to use more closed, multiple choice questions in place of essays.

Many people, myself included, instinctively baulk at the idea of reducing rich and complex subjects like English literature or history to a tick in one of four or five boxes, but as Dylan Wiliam has noted, although "it is true that many selected-response [multiple choice] questions do measure only shallow learning, well-designed selected-response items can probe student understanding in some depth."[203.]

What's more, they are highly efficient. A student can answer, and a teacher (or a machine) can mark, lots of multiple choice questions in the time it would take them to write or mark an essay. And crucially, well designed multiple choice questions are highly reliable and consistent and nigh on impossible to prepare for through rote-learning, memorisation and test-specific coaching. All of which suggests that they are probably underused in contemporary assessment.

Nonetheless, multiple choice questions, no matter how well designed, cannot reveal everything we might be interested in, like a student's ability to write beautifully or persuasively or to construct an argument while offering alternative perspectives or testing counter-arguments. This matters, particularly in the arts and humanities where truths are more subjective and where the possibility of dualism, doubt and irresolution needs to be maintained. In the final reckoning, dialectic reasoning does not submit easily to closed questioning. Rather, it demands that the student be given the freedom to express himself, to discuss and question, and challenge and debate, without necessarily arriving at a fixed position.

So extended writing – essays, project portfolios and so forth – will always have a big and important role to play in testing a student's knowledge and skill. Which is why an innovation called Comparative Judgement (CJ) is getting so many people in the assessment world excited. And why Christodoulou, who has devoted much of her working life to designing assessments that capture and promote real, rather than illusory, educational gains, has recently taken up the post of education director at No More Marking, an online provider of Comparative Judgement.[204.]

Unlike the traditional approach to marking essays, where the quality of a piece of writing is judged against a set of often loosely worded,

202.   Christodoulou, D. (2017) Tacit knowledge. [online] *The Wing to Heaven*. Available at: thewingtoheaven.wordpress.com/2015/07/18/tacit-knowledge/ [Accessed 13 Oct. 2017]

203.   For an example of a multiple choice question that tests deep understanding and higher order thinking, see here: thewingtoheaven.wordpress.com/2013/10/13/multiple-choice-questions-part-two/

204.   Nomoremarking.com (2017) *No More Marking*. [online] Available at: www.nomoremarking.com/ [Accessed 13 Oct. 2017]

ambiguous or subjective criteria set out in rubrics and 4-, 8- and 16-point mark schemes, Comparative Judgement is disarmingly simple. The marker takes two essays, reads them and decides which is better. They then take two more and repeat the exercise. Once five teachers have made 100 judgments each, they just need to load the essays, and those 500 judgements, onto an online CJ engine, and, using an algorithm, it will work out the rank order of all the essays and generate a score for each student.

Furthermore, if you want that score to be a GCSE grade or other kind of national benchmark, then you simply need to include a handful of pre-graded essays in your original 100. You will then be able to see how many essays did better than the C-grade sample, how many better than the B-grade sample, and so on. This method of marking also allows you to see how accurate each marker is. In the words of the No More Marking guide to CJ: "The statistical modelling also produces quality control measures, such as checking the consistency of the assessors."[205]

Presenting the findings of an early CJ trial to a recent researchED conference, Christodoulou describes how the whole process seemed a bit "voodoo" at first, especially for moderators used to painstakingly judging each and every essay against the detailed but slippery criteria set out in a rubric: "In traditional moderator judging sessions, everyone talks and no one agrees. With Comparative Judgment, no one talks and everyone agrees."[206]

As to the level of that agreement, the trial produced impressively high reliability scores – of between 0.85 and 0.89. And it did so in almost no time, as a participating teacher noted: "We got to the same point in half an hour that we usually take six hours to reach."[207]

Summarising, Christodoulou explains:

"The reason why it works, and why it works so much better than criteria-based assessment, is that it offers a way of measuring tacit knowledge. It takes advantage of the fact that amongst most experts in a subject, there is agreement on what quality looks like, even if it is not possible to define such quality in words. It eliminates the rubric and essentially replaces it with an algorithm. The advantage of this is that it also eliminates the problem of teaching to the rubric: if a pupil produced a brilliant but completely unexpected response, they wouldn't be penalised, and if a pupil produced a mediocre essay that ticked all the boxes, they wouldn't get the top mark."[208]

Huge as its potential undoubtedly is – particularly for the way in which key stage 2 writing is taught and assessed – CJ is not a panacea. Yes, it tackles the problem of coaching, but it doesn't necessarily reduce the risk of reallocation or alignment, as teachers work out how many possible questions could come up in a particular exam, which ones came up last

205.   Nomoremarking.com. (2017) *No More Marking.* [online] Available at www.nomoremarking.com/aboutcj [Accessed 13 Oct. 2017]

206.   Daisy Christodoulou - Research Ed 2016. (2017) [video] London: ResearchED. Available at: www.youtube.com/watch?v=3tpUBbLK_g8

207.   Ibid.

208.   Ibid.

year and are therefore unlikely to come up this year, and consequently which ones they will focus their time on, perhaps providing model essays – essays that would get good marks under CJ – for their students to memorise and reproduce.

5.3.2 Teaching teachers about the use and misuse of assessment

As Koretz says, tests are samples of a wider domain and samples can always be gamed. That is why, ultimately, the answer rests not just in making it harder to teach to the test, important as that is, but in educating teachers (and policymakers) so they better understand what teaching to the test is and why it is so damaging.[209.] For the thing that makes this problem so pernicious, and so difficult to eradicate, is that most teachers and senior leaders simply don't know they are doing it when they are. Indeed, as Christodoulou reveals in the following anecdote, many actually mistake teaching to the test with good practice:

> "A couple of years ago, I was at a conference where a deputy head of a successful school presented the amazing exam results his school had achieved over the past few years, and outlined some of the ways he'd achieved them. In the question and answer session afterwards, I asked how he could be sure that these results were down to improved teaching and learning and not just teaching to the test. His reply was that all of his teachers and students were working harder, and that it was so much easier nowadays for pupils and teachers to download past papers from the internet and work on their areas of weakness… But having read Koretz, [she realised] this argument does not stand up at all. Teaching which focuses on past papers and test prep is not teaching to the domain. It's teaching to the sample. The improvements it generates are not likely to be genuine.
>
> What is also particularly worrying about this example is that even when asked to identify a form of teaching and learning which was not test prep, this deputy referred to methods of test prep. Teaching to the test has become teaching and learning. It is hard for many people to have a model of improved teaching and learning which is not teaching to the test. It is for this reason that I am so keen on schools using a rigorous and detailed curriculum. The curriculum is not as wide as the domain either, but it is much wider than either the syllabus or the exam. Unlike the syllabus and exam, it is designed with teaching and learning in mind, not assessment."[210.]

If any story underlines the need to teach teachers about assessment, and about the dangers of teaching to the test, this is it.

But as Tom Sherrington describes in a recent blog post, the prize for getting this right – for getting teachers to understand how to use assessment to inform their teaching and support their students' learning – is significant.[211.] If teachers were to get over their obsession with summative

---

209.   Koretz, D. (2012) Measuring up: What educational testing really tells us. Johanneshov: TPB

210.   Daisy Christodoulou - Research Ed 2016. (2017) [video] London: ResearchED. Available at: www.youtube.com/watch?v=3tpUBbLK_g8

211.   Sherrington, T. (2017) *Towards an Assessment Paradigm Shift* Teacherhead [blog]. Available at: teacherhead.com/2017/07/16/towards-an-assessment-paradigm-shift/

tests and exam grades (which, after all, are nothing more than arbitrary lines on a continuous distribution), and focus instead on genuine formative assessment – high frequency, low-stakes, narrowly-focused testing that feeds directly back into the teaching and learning process – the effect could be a transformation of learning outcomes across the curriculum. A transformation that brings to mind the story of a young boy called Austin who, with the help of clear and effective feedback from his teacher and his peers, famously went from not being able to copy a picture of a butterfly to producing an impressively accurate reproduction in just six drafts.[212.]
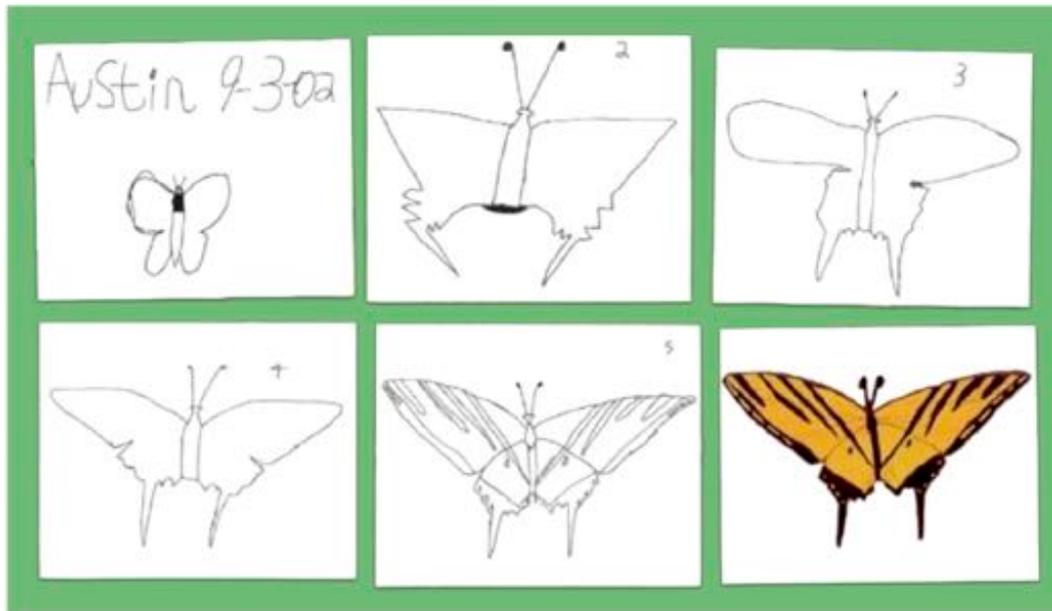
212. EL Education (n.d.) *Austin's Butterfly Drafts* [online] Available at: modelsofexcellence. eleducation.org/projects/austins-butterfly-drafts

The Ideal School Exhibition

5.4 Improving accountability

"You're not from Ofsted are you?" Those were the words with which Duncan Bathgate, the head of Bealings primary school, greeted me as I climbed out of my car after a two-and-a-half hour drive into rural Suffolk. The question was a mischievous one – I had rung in advance and explained who I was and why I was visiting – but his humour couldn't disguise his very real suspicion of the educational bureaucracy, whose ever-changing demands he receives with a knowing and growing weariness. Like an officer stationed in a far flung military outpost, Bathgate has, psychologically at least, long since broken from central command.

What I couldn't understand was *why* he was so suspicious of the Inspectorate. Yes, his educational philosophy and his teaching methods may not be flavour of the decade in Whitehall, but no one is stopping him from running his school as he sees fit and Ofsted has now (rightly) identified Bealings as an 'Outstanding' school not once, not twice, but on five consecutive inspections – proof, it seemed to me, that the system he so distrusted was in fact working pretty well.

And that was what I continued to believe until, a few weeks later, I visited Shireland Collegiate Academy in Smethwick where the head, Sir Mark Grundy, shared his jaw-dropping story.

Shireland is a highly innovative school that uses its own curriculum and competency-based assessment framework called 'Literacy for Life', which it delivers through cross-curricular projects and enquiries. What is more, it underpins its entire model with technology; a digital platform that allows the school to personalise each student's learning journey; that enables everyone around the student – family, friends and teachers – actively to support them on that journey; and that allows the journey to continue outside of the school day and beyond the school gates. Although they do many of the things that traditionalists, citing the work of cognitive psychologists like Dan Willingham, warn against, they, like School 21 and School XP, have shown what can be achieved through skilful project design, sophisticated teaching and forensic progress tracking.

When inspectors arrived one morning in 2010, Shireland, which had recently become an academy, was sitting on an Ofsted 'Outstanding' judgment. And it is an outstanding school, although also an unusual one which, for the uninitiated, takes some time properly to understand. When I visited, I spent a good two hours sitting with Grundy in his office, while he explained what he was trying to achieve, how he was trying to achieve it, why he was trying to achieve it in the way he was and what systems he had in place to tell him if he was succeeding. The inspectors decided to do things differently, heading straight into observing Key Stage 3 'Literacy for Life' lessons which, stripped of context, instantly set alarm bells ringing. By 11am, Grundy recalls, they had failed three lessons. By the time they left, they had failed the whole school. It was the first time an 'Outstanding' school had gone, in one bound, straight into "special measures."[213.]

213.   In conversation with the author (February 2017)

Grundy appealed the decision and, while he did, could say little in his own defence. But that didn't stop others piling in, with those who opposed his methods citing the judgment in support of their views, and the unions, who were opposed to academisation, doing the same in support of theirs. Those more concerned with scoring political points, meanwhile, used the school's dramatic fall from grace to criticise Michael Gove's sensible decision, taken shortly before, that outstanding schools need not be inspected as frequently as others. Had all of them waited a few months until the school was re-inspected and found to be outstanding (as it would be again two years later when it was placed in the highest category for the third inspection in a row) they might have thought better than to place so much weight on such a potentially flawed system.

Fortunately, one person who does understand the risks inherent to any assessment of school or teacher performance, whether based on exam results or inspectors' observations, is Amanda Spielman, the new head of Ofsted.

Spielman, whose lack of teaching experience is offset by a sophisticated understanding of data – a skill honed during her years as a senior manager at Ark schools and then as chair of Ofqual – has already signalled her commitment to evidence-based policy by beefing up the inspectorate's research capability and by reaching out to the wider research community.[214] This, she hopes, will increase the reliability and validity of Ofsted's judgments which, as the Education Policy Institute has shown, tend to be more favourable to schools with very few deprived pupils, and harder on schools with lots of deprived pupils, than would be the case if they were based purely on their value added performance scores.[215] Speaking earlier this summer, Spielman made a point of promising that Ofsted's growing research capability would be dedicated, in large part, to ensuring its judgements are shaped "not by personal prejudices or hobby horses but on proper evidence from the ground."[216]

5.4.1 A new role for Ofsted

Just as Spielman intends to use her forensic attention to evidential detail to reduce the threat of inspectors' biases to the reliability and validity of their judgments, so she intends to shine a light on the things some schools are doing to inflate their scores and achieve a better-than-warranted judgment.

In what was widely and rightly seen as a 'game changing' speech in June of this year, the chief inspector had this to say:

"One of the areas that I think we sometimes lose sight of is the real substance of education. Not the exam grades or the progress scores, important though they are, but instead the real meat of what is taught in our schools and colleges: the curriculum.

To understand the substance of education we have to understand the objectives. Yes, education does have to prepare young people to succeed

214. Spielman, A. (2017) Speech at the Festival of Education, 23rd June 2017, Wellington College. Available at: www.gov.uk/government/speeches/amanda-spielmans-speech-at-the-festival-of-education
215. J Hutchinson (2016) School Inspection in England: is there room to improve? Education Policy Institute
216. Spielman, A. Op sit.

in life and make their contribution in the labour market. But to reduce education down to this kind of functionalist level is rather wretched.

Because education should be about broadening minds, enriching communities and advancing civilisation. Ultimately, it is about leaving the world a better place than we found it. As Professor Michael Young put it: 'Schools enable young people to acquire the knowledge that, for most of them, cannot be acquired at home or in the community.' Yet all too often, that objective, that real substance of education, is getting lost in our schools. I question how often leaders really ask: 'What is the body of knowledge that we want to give to young people?'

As one head, Stuart Lock [now at Bedford Free School], put it during a typically insightful thread of tweets: 'Most schools don't think about curriculum enough, and when think they do, they actually mean qualifications or the timetable.'

And I have become ever more convinced of this, as a visitor to schools and as an observer of some of our inspections. In some of those, I have seen GCSE assessment objectives tracking back into Year 7, and SAT practice papers starting in Year 4. And I've seen lessons where everything is about the exam and where teaching the mark schemes has a bigger place than teaching history.

That is not what will set our children up for great futures. Nor will the growing cannibalisation of key stage 3 into key stage 4. Preparing for GCSEs so early gives young people less time to study a range of subjects in depth and more time just practising the tests themselves.

We have a full and coherent national curriculum and it seems to me a huge waste not to use it properly. The idea that children will not, for example, hear or play the great works of classical musicians or learn about the intricacies of ancient civilisations – all because they are busy preparing for a different set of GCSEs – would be a terrible shame. All children should study a broad and rich curriculum. Curtailing key stage 3 means prematurely cutting this off for children who may never have an opportunity to study some of these subjects again."[217.]

At this point Spielman cuts to the chase, effectively serving notice to the gamers that she is calling time on the game:

"But – and I need to be clear here – if you are leading a school that enters 90 percent of young people for the European Computer Driving Licence – a qualification that can take only two days to study for – then you must ask yourself whether you care more about the school's interests than about making the most of pupils' limited time at school. If you don't encourage EAL (English as an additional language) students to take a taught language at GCSE because they can tick that box with a home language GCSE instead, then you are limiting their education.

Again, if you are putting more resources into providing exam scribes than in teaching your strugglers to read and write, or scrapping most of your curriculum through Year 6 to focus just on English and maths. If you are doing any of those things then you are probably doing most of your students a disservice.

217. Ibid.

This all reflects a tendency to mistake badges and stickers for learning itself. And it is putting the interests of schools ahead of the interests of the children in them. We should be ashamed that we have let such behaviour persist for so long."[218.]

Some school leaders will no doubt bridle at the sharpness of her language. And most will think it a bit rich coming from the head of an institution whose power to destroy reputations and careers has driven many of the behaviours she describes. But it is hard to argue with the message itself, especially as it was followed by a key passage setting out a new role for Ofsted which anyone who wants to see more mission-oriented schools should surely welcome:

"And, as a regulator, we at Ofsted have a responsibility too: to make sure that, if schools focus on the right things, then a good inspection outcome will follow.

So I believe we have a vital role in balancing the accountability system. What we measure through inspection can counteract some of the inevitable pressure created by performance tables and floor standards. Rather than just intensifying the focus on data, Ofsted inspections must explore what is behind the data, asking how results have been achieved. Inspections, then, are about looking underneath the bonnet to be sure that a good quality education – one that genuinely meets pupils' needs – is not being compromised."[219.]

Note the pledge: that Ofsted will *balance* the accountability system and *counteract* the pressure created by performance tables and floor standards. And that it will do so by reporting not only on what schools are achieving, but how they are achieving it and at what cost – a quantum shift.

This suggests that Ofsted will be on the lookout for suspicious numbers and abnormally distributed results; for the saw tooth pattern where results rise as schools, teachers and pupils become familiar with a particular test specification only to fall again when a new specification is introduced; for large numbers of students clustered just above key thresholds, with big disparities between, for example, the proportion achieving five GCSEs between A* and C and those achieving five GCSEs between A* and B; for the qualifications schools are selecting to fill the "open slots" in Progress 8 (where ECDL went), bearing in mind that the accountability system assumes that all passes at the same grade represent the same level of challenge, even though we know from published APSE (average point scores per entry) data that there is significant variation both between subjects (with a C grade in modern foreign languages, for example, harder to achieve than in other GCSEs)[220.] and between qualifications (with students achieving a third of a grade higher on average in non-GCSE equivalents

218. Ibid.
219. Ibid.
220. Thomson, D. (2017) *Another attempt at a qualification neutral Progress-8 measure*. Education Datalab blog, [blog] 24 January. Available at: educationdatalab.org.uk/2017/01/another-attempt-at-a-qualification-neutral-progress-8-measure/

than in GCSEs)[221], and for signs that some subjects, like the arts, are being squeezed out as schools herd students towards qualifications that are easier to obtain or cheaper to teach.

5.4.2 More data, more nuance

In addition, both Ofsted and the Department for Education could place greater emphasis on other information that, in combination with test data, might provide useful indicators of the health of a school. Like figures on staff absence and turnover, for example. A school where adults enjoy teaching is usually a school where students enjoy learning. Schools where staff take unusually large numbers of days off, or where they tend not to stay for long, are schools that Ofsted should be casting a concerned eye over.

The same goes for student retention where Ofsted reporting should complement an important reform recommended by the Education Datalab think tank, whereby schools' league table scores should be reweighted by including the GCSE results of pupils who, for whatever reason, leave between the start of the secondary school and the time they sit their GCSEs 15 terms later.[222] The change couldn't be simpler: the DfE simply allocates pupils' results to the institutions where they have spent time on-roll in proportion to the amount of time they spent there – 100 percent if they spent all 15 terms there, 60 percent if they spent nine terms there, 20 percent if they spent three terms there. This one change would address several perverse incentives at a stroke. It would reduce the disincentive for a school to admit a struggling student a year or so before the exams, as most of the costs of their failure, should they do badly, fall on the school from which they are arriving. It reduces the positive incentive to manage hard-to-teach students off roll shortly before the exams to boost a school's league table position. And it forces the school the student is leaving to think about where he or she will go next, with an inbuilt incentive to secure high quality provision.

Both Ofsted and the DfE could also put a school's exam results in a wider context by presenting more so-called 'destinations data' – information about what students go on to learn or earn after leaving school.

Tim Leunig, the DfE's recently departed chief scientific officer and data analyst, talks excitedly about the possibilities opened up by the creation of a vast new data set, the Longitudinal Educational Outcomes data set, or LEO for short. LEO has only existed for a year or so, and is the product of matching the tax and benefits data held by the Department for Work and Pensions (DWP) to the university and schools data held by the DfE. To date, analysts have spent most of their time looking at the financial returns from different higher education institutions and courses. But in time, the potential is there to learn far more about how well different schools, and different approaches to schooling, prepare young people

221.   Thomson, D. (2016) *Does Ofqual also need to look at the grades awarded in non-GCSE qualifications?* Education Datalab blog, [blog] 2 May. Available at: educationdatalab.org.uk/2016/05/does-ofqual-also-need-to-look-at-the-grades-awarded-in-non-gcse-qualifications/

222.   Nye, P. (2017) *Who's left: How do pupils count in league tables, and how does our reweighting approach work?* Education Datalab available at: educationdatalab.org.uk/2017/01/whos-left-how-do-pupils-count-in-league-tables-and-how-does-our-reweighting-approach-work/

for further study, work and life. If schools are gaming the accountability system, and narrowing and hollowing out their curriculum by teaching to the test, and if that is, as assessment experts predict, unlikely to prepare students for the sorts of challenges they will face in post-compulsory education or work, the data should hint at that. And if mission-oriented schools fail to mitigate the sorts of risks outlined in this report – if Michaela's students struggle in the absence of structure and stricture once at university or out in the world for example, or if those schools that devote time, energy and resource to building character, as well as teaching knowledge, have overestimated the educability or importance of the former relative to the latter – then we may see evidence of this in things like university drop-out rates, the frequency and duration of periods of unemployment and in earnings.

Of course, when trying to measure the effectiveness of any educational institution by reference to quantitative data, more information is always better than less. But even LEO, with its millions of data points, doesn't take the public discussion much higher than the current, functionalist level that Spielman describes as "rather wretched."[223] What it will do, however, is help put the data on which we currently place far, far too much weight – the percentage of students hitting a threshold, or an average rate of progress across a cohort – in a broader context. Should the gains a school presents to the world prove illusory or temporary, destinations data should help reveal that. Equally, should the unnoticed or unmeasured work a mission-oriented school is doing to prepare its students for life, as well as for exams, go undetected by examiners, they should help reveal that too.

But the reason all attempts to quantify school effectiveness lead, inevitably, to a rather reductive view of education's purposes is because many of education's most valuable outcomes simply cannot be measured. Virtues like wisdom, compassion and moral courage, for example, will never show up in government data sets, no matter how big. And things like selflessness and duty, which often lead people to turn their backs on the chance to earn good money in favour of helping others, might even lead analysts to think that they, or the institutions that educated them, had somehow 'failed'.

The fact is, just as mission-oriented schools pursue different missions, rooted in different values and aimed at different outcomes, so their successes will take different forms.

5.4.3 Mandating adequacy, unleashing greatness

It was former New York City Chancellor Joel Klein who said "You can mandate adequacy but you can't mandate greatness. It needs to be unleashed."[224] Yet Ofsted's attempts to define and identify great schooling have the opposite effect – keeping great schools on an unnecessarily short leash. And the effect of that is to restrict freedom, limit diversity, increase risk aversion, stifle innovation and disincentivise collaboration and school-to-school support.

223. Spielman, A. (2017) Speech at the Festival of Education, 23rd June 2017, Wellington College. Available at: www.gov.uk/government/speeches/amanda-spielmans-speech-at-the-festival-of-education

224. Barber, M. and Klein, J. (2016) *Unleashing greatness: nine plays to spark innovation in education*. World Economic Forum

In a recent paper for the World Economic Forum, Klein, together with Michael Barber, now chairman of Delivery Associates, sets out nine steps to unleash greatness through system level innovation.[225.]

First, they argue, educational leaders need to set out a compelling vision. In the context of the English schools system, this, at the very least, means ministers, regulators and opinion formers making crystal clear that education is about more – far more – than students obtaining certificates, and schools meeting bureaucratic targets. The goal of leadership is to raise people's sights and ambitions above these sorts of intermediate goals – goals that should always have been the concern of mid-level managers and administrators.

Second, they should set ambitious goals, including nearly impossible ones that cannot feasibly be met without innovation and drive. These goals, they note, should be paired with enough flexibility to create room for new innovation.

Third, create enough choice and competition to give parents meaning-ful options; to put pressure on schools to respond to parental preferences; and to act as a spur to innovation as they do so. Importantly, they note that careful system design – particularly with regard to issues like school admissions – is critical if the benefits of market-based reforms aren't to come at the price of equity. Here ministers should be bold and rule that no school should any longer be its own admissions authority. This is one freedom that cannot possibly improve the quality of a school's teaching. Rather it represents an open invitation to take the low road to school improvement; to boost your school's scores without improving your teach-ing – the very definition of gaming.

Indeed, so important is a proper reform of school admissions to the proper functioning of the system that the RSA intends to establish a Commission on School Admissions to find the best and fairest ways of allocating places within over-subscribed schools.

Fourth, pick many winners. The authors note that: "Supporting multiple ideas or approaches at once spurs all providers to continue to improve and compete – whether you are testing new technology tools or new school models. Systems that reward a single 'winner' discourage further improvement and learning, and tend toward stagnation."[226.] Clearly, this sits uneasily alongside an approach that seeks to define and identify outstanding schools against a single inspection framework. And more uneasily still with the tendency of ministers to proselytise for their preferred model of schooling.

Fifth, use benchmarking and track progress. Here they acknowledge the centrality of assessment and the importance of data, but add a key warning, that: "no matter the quality and clarity of the data, the data only provides an imperfect representation of something even more important: the real world learning outcomes that matter to citizens" – an echo of Koretz and Christodoulou's warnings about mistaking the sample for the domain, the proxy for the goal.

Sixth, evaluate new innovations. Innovation for innovation's sake is not the point; innovations need to work. That is why organisations like

225. Ibid.
226. Ibid.

the Education Endowment Foundation, and randomised control trials like those the RSA is conducting with the EEF, are so important if best practice is to be identified, shared and scaled.

Seventh, combine autonomy and accountability. In the English context, the challenge is to find a better balance between the two by giving strong schools more of the former and less of the latter. And to ensure that the accountabilities that remain promote, rather than constrain, innovation. Here the pupil premium – additional per pupil funding to boost the performance of low-income students – provides a useful guide. When the pupil premium was created, ministers were quite clear: it was up to schools how they used the money, but they would be held accountable for what they achieved with it. By getting the balance right between accountability and autonomy, the pupil premium was designed specifically to act as a spur to innovation.

Eighth, invest in and empower agents of change. It is no coincidence that several of the most innovative, mission-oriented schools I visited are new schools, founded and/or led by outsiders and newcomers, or those who had grown frustrated by the orthodoxies and received wisdoms that underpin the existing system. There are, of course, arguments both for and against the Free School programme as currently designed (particularly with regards to where some of them are situated at a time when more school places are desperately needed to keep pace with school-age population growth). What is incontrovertible, however, is that this radical experiment in supply side liberalisation has been a boon to innovation and change.

And finally, reward success (and productive failure). It takes guts to try new things not knowing whether they will work out; easier by far to keep your head down and play it safe. But in a system that has struggled for years to deliver a step change in outcomes, more of the same is not what is needed. By recognising and celebrating successful experiments – and less successful ones from which valuable lessons were learned – we send a signal to existing and future innovators that the risks associated with doing something new are worth bearing. One word of warning, however: children only get one shot at school, which is why experimentation in education cannot be compared directly to other sectors where consumers can be insulated from R&D setbacks, or where the costs of failure are lower. So small scale trials are key, with 'dosage' (the intensity and duration of the 'treatment') and the size of the treatment group deliberately set at the lowest possible level at which an effect can be detected.

We can quibble about the relative importance of Klein and Barber's nine steps, but the key point is this: if we want to see more mission-oriented schools innovating in pursuit of different missions, then we need to accept that excellence will take different forms, and that it is not the role of government even to describe, let alone prescribe, what that looks like. Rather, the rightful role of government should be to protect those pupils who will pay the heavy price of attending a chronically underperforming school. To mandate adequacy in other words.

Mandating adequacy

In truth, the words 'mandating adequacy' only capture one aspect of the state's quality assurance role: the measures of last resort it must take to protect children from prolonged exposure to inadequate schooling.

Considering how few schools are judged to be inadequate by Ofsted (two percent as of August 2017),[227.] and how serious the consequences are for children who attend such a school, it is hard to argue that the government is defining failure too loosely or intervening too readily.

What is less clear is whether the actions it takes when it does intervene are the right ones, and whether it is doing enough to ensure schools receive sufficient external challenge and support at an early enough stage to prevent them becoming what the DfE euphemistically describes as 'eligible' for intervention later on.

As of 2015, any maintained school deemed 'Inadequate' by Ofsted is automatically issued an 'academy order', forcing it to academise. But recent research by the Education Policy Institute (EPI) suggests that requirement may do more to support the aims of the academy programme than the aim of school improvement.[228.] While the early sponsored academies (those that opened between 2002 and 2010) did deliver significantly better academic outcomes, equivalent to a whole grade in each of five GCSE subjects four years after conversion, there is no evidence that the post-2010 sponsored academies have had a positive impact on standards. Indeed, the researchers found that the attainment and progress gains recorded by such schools tend to occur in the year before and the year of their conversion to academy status, before falling again in the three years after conversion, disappearing completely by year four.

As to whether schools within multi-academy trusts outperform those overseen by local authorities, the researchers found that at primary level, schools within MATs are over-represented in both the highest and lowest performing groups. At secondary level, the researchers find more MAT schools in the low than the high performing group. When they aggregate scores across all trusts and all local authorities, they found that, at primary level, the mean improvement score within local authorities was 0.0 and within multi-academy trusts +0.1, while at secondary level, the mean improvement score within local authorities was -0.7 compared to -1.1 within MATs, leading to the rather understated conclusion that, in the effort to raise standards in struggling schools, academisation is "no panacea."[229.]

The researchers' main finding is that while there is little difference between the average improvement in schools in MATs and schools in local authorities, there is significant differences within these two groups. As a result, they note:

> "it is more important to ask whether a child is in a high-performing
> MAT or a high-performing local authority than it is to ask whether a

227. Ofsted (2017) Management Information – schools – as at 30 September 2017, *Maintained schools and academies inspections and outcomes: official statistics.* Available at: www.gov.uk/government/statistical-data-sets/monthly-management-information-ofsteds-school-inspections-outcomes

228. Education Policy Institute (2017) *The Impact of Post-2010 Sponsored Academies.* EPI. Available at: epi.org.uk/wp-content/uploads/2016/09/Post-2010-sponsored-academies-FINAL.pdf

229. Ibid.

child is in an academy school or a local authority school. For example, moving from a school in a high-performing local authority to a school in a low-performing multi-academy trust would appear to risk a significant decline in progress and attainment. The difference between the highest-performing local authority and lowest-performing large multi-academy trust in secondary education is equivalent to just over 7 grades for pupils across their GCSEs."[230.]

Knowing how effective the very best MATs are at identifying and reversing any drop in their schools' performance, it is easy to see why the government is so keen for them to play an increasingly prominent role in school improvement. But not only are too many MATs currently low performing, but not all academies are in MATs, and only a minority of all schools are academies. Of the 21,945 state-funded schools in England, 6,704 are academies, of which 1,744 are stand-alone academies and 4,960 are in MATs.[231.] Two thirds of all schools (75 percent of primaries and 29 percent of secondaries) are still local authority maintained schools.[232.] We remain a long way from the fully academised system the government was, until recently, talking about bringing into existence, through compulsion if need be, with basic capacity constraints, and the salutary experience of what can go wrong when MATs expand too fast, acting as a brake on further expansion. As the Education Select Committee has noted:

> "In order for the MAT model to succeed there needs to be a greater number of sponsors in the system. Certain areas of the country are struggling to attract new sponsors and small rural schools, largely in the primary sector, are at risk of becoming isolated. There is also growing concern for 'untouchable' schools which trusts refuse to take on. The Government should ensure that schools which are under-performing are not left behind by a programme which was originally designed to support such schools."[233.]

The scale of this last problem is underlined by the disclosure in October 2017, that a quarter of schools that were legally required to become academies under the provision of the 2016 Education and Adoption Act were still without a sponsor 12 months after the academy order was issued, effectively turning them into stigmatised 'orphan' schools.[234.]

The challenge then is simply defined: to ensure that every low performing or deteriorating school that doesn't have a high performing local

230.   Andrews, J. (2016) *School performance in multi-academy trusts and local authorities – 2015*. Education Policy Institute. Available at: epi.org.uk/wp-content/uploads/2016/07/school-performance-in-multi-academy-trusts.pdf

231.   Ofsted (2017) Management Information – schools – as at 30 September 2017, *Maintained schools and academies inspections and outcomes: official statistics.* Available at: www.gov.uk/government/statistical-data-sets/monthly-management-information-ofsteds-school-inspections-outcomes

232.   Ibid.

233.   House of Commons Education Committee (2017) *Multi-academy Trusts: Seventh Report of Session 2016-17*. UK Parliament. Available at: publications.parliament.uk/pa/cm201617/cmselect/cmeduc/204/204.pdf

234.   George, M. (2017) Failure to find sponsors raises 'serious' questions over academisation law, *TES*. Available at: www.tes.com/news/school-news/breaking-news/exclusive-failure-find-sponsors-raises-serious-questions-over

authority or MAT behind it, receives the early support it needs to raise its standards. In other words, to ensure that all the 1,867 schools that, as of August 2017, were in the 'Requires Improvement' category, plus any of the 14,237 'Good' schools and 4,465 'Outstanding' schools where standards are beginning to decline, are helped to address their weaknesses before they crash through the floor and are judged to be 'Inadequate'.[235.]

The idea that central government or the inspectorate can do this is fanciful. Even a more focused Ofsted will continue to be hugely constrained by capacity and isn't, in any case, configured to support school improvement. And the time it takes for problems in a school to translate into a noticeable drop in student performance prevents the DfE, armed only with time-lagged and limited SATs and GCSE data, from performing that role, even if it had the necessary skills at its disposal which it does not. Timely and effective support requires local intelligence – people who know that the usually highly effective headteacher is in crisis following a family tragedy, or that three key members of staff have left and been replaced by newly qualified teachers who are struggling to find their feet. It requires an effective 'middle tier' between schools and the government.

The government's response – the creation of a network of eight regional schools commissioners, advised by headteacher boards – has been almost entirely reactive, with ever more staff being appointed to perform the herculean task of surveying the thousands of schools for which they are responsible. I could not find a system analyst who believes these regional outposts of the civil service provide a full and final answer to the question of how best to raise the standard of schools' provision, however. Monitoring performance is what they (struggle to) do. Raising performance is not.

Some, like David Blunkett and former government advisor Robert Hill, the author of the RSA commissioned report 'The Missing Middle', have argued that the long-term solution is to devolve the job of school oversight and support to city or sub-regional government to recreate the key features and dynamics of some the most successful school improvement strategies around the world, like those in London, New York and Ontario in the first decade of this century.[236.] The risk is of coverage and equity, with city regions like Birmingham and Manchester well placed to lead a joined up, ambitious school improvement drive, with other areas, particularly in rural England, less well placed.

An alternative approach, and one that would be easier to move towards, would be to create a 'contestable middle tier' – an idea proposed by David Laws, the former Liberal Democrat schools minister, and resisted by Michal Gove, back in 2012 when they worked together in the Conservative / Liberal Democrat coalition.[237.]

Under this proposal, existing middle tier bodies – local authorities (and the small number of independent Trusts established to replace LEAs

235. Ofsted (2017) Management Information – schools – as at 30 September 2017, *Maintained schools and academies inspections and outcomes: official statistics*. Available at: www.gov.uk/government/statistical-data-sets/monthly-management-information-ofsteds-school-inspections-outcomes

236. Hill, R. (2012) *The Missing Middle: The Case for School Commissioners*. The RSA. Available at: www.thersa.org/discover/publications-and-articles/reports/the-missing-middle-the-case-for-school-commissioners [Accessed 13 Oct. 2017]

237. Laws, D. (2016) *Coalition: The Inside Story of the Conservative-Liberal Democrat Coalition Government*. Biteback Publishing

like the Hackney Learning Trust) and all those MATs big enough to have a serious central office function – would be given the task of supporting their schools. But, using a methodology like that proposed by the DfE in 2015, these school improvement bodies would themselves be held accountable for their performance, with those that fail to improve (or maintain) school performance, losing their school improvement 'licence', with their schools passed to other existing middle tier bodies or to new entrants.[238] Thus a 'buffer' would be put in place between individual schools and the Department which should work over time to increase the amount, and the quality, of support schools are given. Rather than relying on the ability of a struggling and isolated school to shop around in a fragmented school improvement market, or the willingness of high performing schools to support weaker schools nearby, every school would have a body responsible for providing or commissioning school support services and accountable for the impact those services made. Such a system would still rely on the principle of school-to-school support, but there would now be a body whose job it was to make that happen and make sure it worked. It is an open question as to whether, to ensure all middle tier bodies had access to the same resources and powers, the school improvement part of the local authority should be split off and turned into a MAT, with the local authority focusing on its crucial residual functions – place planning, admissions, transport, SEN support and so forth. Logic (and tidiness) suggests it should, although this leads to only one destination: full academisation.

Unleashing greatness

If we were to act on Joel Klein's insight – that excellence cannot be mandated, but needs to be unleashed – we would start by doing as Russell Hobby, the former general secretary of the National Association of Head Teachers, has suggested and abolish Ofsted's 'Outstanding' category.[239] As Hobby explains:

> "Ofsted should return the definition of outstanding to the profession and content itself with 'good' and 'not yet good'… When a school is good, it should then be allowed to participate in a high quality peer review system, several of which are in existence already, each with their different styles… Can Ofsted rise to the challenge and loosen its stranglehold on the definition of excellence? Good leaders are rarely motivated by someone else's vision. Ofsted should return to the proper role of a regulator and allow professional conversations to flourish about what greatness looks like, not what Ofsted wants… That's when we'll get lift-off on standards."[240]

238. The Department proposed that middle tier performance would be judged by a combination of how well schools in a given chain or local authority are currently performing (based on current value added scores); and how that performance has changed over time by looking at improvement in value added scores

239. Cruddas, L. (2015) *Leading the Way: Blueprint for a Self-Improving System* Association of School and College Leaders. Available at: file:///C:/Users/Naomi.Bath/OneDrive%20-%20RSA/downloads/blueprint_for_a_self_improving_system_feb_2015_final_web.pdf

240. Hobby, R. (2014) *Ofsted shouldn't decide which schools are outstanding. Teachers Should.* NAHT [blog]. Available at: www.naht.org.uk/welcome/news-and-media/blogs/russell-hobby-general-secretary/ofsted-shouldnt-decide-which-schools-are-outstanding-teachers-should/

Sponsors and governors also have a vital role in defining excellence for their schools – a role that the Church has long understood. To ensure that its schools hold true to their faith-based mission, the Church has long inspected them and judged their provision against their own success criteria. This process, known as SIAMS (Statutory Inspection of Anglican and Methodist Schools), is used to ensure that church schools' distinctiveness is based on "a wholehearted commitment to putting faith and spiritual development at the heart of the curriculum."[241.]

There is nothing to stop non-faith governors and trustees from drawing up a secular version of such a framework – a set of values-based goals that cascade down to a list of practical activities. In this way, the school gets a helpful guide as to how to turn a high-level, rather abstract vision (like 'head, heart and hand' in the case of Bedales) into a practical project. And the Trust or governing body, as the guardian of the schools' ethos, gets a set of metrics by which to judge the school's fidelity to that vision.

And when in the future Ofsted visits a mission-oriented school that has codified its objectives and supporting practices in this way, it could usefully report on its achievements not only against its own framework, but against the school's. If a school privileges character development, or arts and creativity, or social action and volunteering because it believes these activities to be central to the task of preparing its students to live a good life, then Ofsted should take the time to report on them and should dedicate a section of its inspection reports to doing so.

241. SIAMS (2012) *A framework for inspection and self-evaluation of Church of England and Methodist schools,* The National Society. Available at: www.churchofengland.org/media/1585094/siamsinspectionframeworknovember2012.pdf

5.5 A teacher-led renaissance

As Ofsted steps back from its current overbearing role, so we need schools to step up and fill the gap, taking on more responsibility for their own standards. Fortunately, there are already ample signs of the profession doing exactly that.

Four years ago, Tom Bennett, now the government's 'behaviour Tsar', accidentally established what has become a thriving grass-roots, teacher-led movement to promote evidence-informed teaching; researchED.

Bennett announced on Twitter that he was putting together a conference on educational research, and asked if anyone wanted to help. The researchED website picks up the story:

> "Four hours later, by 2am, he had received two hundred offers of help, moral support, venues and volunteer speakers. "I didn't build researchED" says Bennett, "it wanted to be built. It built itself. I just ran with it." After puzzling over the venue offers, Tom settled on Dulwich College, and on the first Saturday after the beginning of the new school year in September 2013, over 500 people came to talk, listen and learn."[242.]

Today, researchED organises regular regional conferences, provides an online library of resources and is expanding internationally.

> "I don't know how this all ends" says Bennett. "researchED isn't about fetishising research, or demanding that everything in education is decided by research – far from it. In fact, I'd say there were whole oceans of the school experience that are more to do with craft. But there are huge areas that are amenable to scientific investigation, and other areas where other disciplines, such as psychology, can offer useful insights. It's time teachers started insisting on evidence before being expected to accept every claim and magic bullet sent their way. It's time for a quiet revolution."[243.]

Another key development was the establishment, earlier this year, of the Chartered College of Teaching, a professional body run by teachers for teachers, which aims to "promote the learning, improvement and recognition of the art, science and practice of teaching for the public benefit."[244.] Like other chartered professional institutes, it aims to become the means by which the profession takes responsibility for, and ownership of, its own standards, status and future. As one deputy headteacher put it:

> "The long-term benefits could be extraordinary. If we are to finally free ourselves from top-down policymaking and call ourselves professionals, we must embed research into our practice and a Chartered College will help us do this."

242.   ResearchED (2016) Our Story: How it all began, ResearchED. Available at: researched. org.uk/about/our-story/
243.   Ibid.
244.   Enser, M. (2017) *Why we need the Chartered College of Teaching*. Chartered College of Teaching [blog]. Available at: chartered.college/why-we-need-the-chartered-college

Speaking at the College's launch in February 2017, its CEO, Dame Alison Peacock, said: "I hope we look back on today as the day we reclaimed our professionalism."[245.]

Other grass roots initiatives and networks have also grown up in recent years, including Parents and Teachers for Excellence, the brand new teacher-created College of Teaching, the EEF supported network of Research Schools and others like Whole Education, Slow Education, the Expansive Education Network that are united by a particular educational philosophy or approach.

But the grass roots initiative that most directly addresses the primary problem on which this paper is focused – the narrowing and hollowing out of education caused by our high-stakes accountability system – is the creation of a National Baccalaureate, the brain-child of Tom Sherrington. Here he is explaining what it is designed to achieve:

> "Our current framework for recognising the achievements of young people has numerous inherent flaws many of which would be resolved by the introduction of a Baccalaureate framework, built around existing qualifications. This is our chance to change things so that, by 2025, the way we view success and achievement will have changed significantly.
>
> At the heart of the concept is a belief in the value of a broad education; the kind that would allow all young people to develop as rounded individuals with the knowledge, skills and personal attributes required to lead productive, fulfilling lives as citizens of the world…
>
> And yet our current system is so narrowly focused on examination outcomes that major areas of learning and achievement are systematically and disastrously undervalued, and the examination system is placed under unsustainable strain. Ever increasing expectations of rigour, validity and reliability are heaped upon it by the culture of hyper-accountability, leading schools and colleges into perverse behaviours that compromise the integrity of long-standing subject disciplines."[246.]

The figure below sets out the National Baccalaureate's core features.[247.]

The National Baccalaureate doesn't alter the existing incentives for schools to provide a high quality academic education to all children aged five to 16, and either an academic or technical/vocational education (or a mix of the two) thereafter. But it does create an incentive to augment that education with a project designed to demonstrate deep learning, as well as a programme of personal development that tests a student's character, physical prowess or creativity – in other words, the degree to which the school has attended to the head, heart and hand.

245. Crabb, K. (2017) *Secretary of State heralds historic moment for teaching profession,* Chartered College of Teaching [blog]. Available at: chartered.college/secretary-of-state-justine-greening-heralds-historic-moment-for-teaching-profession-with-the-launch-of-the-chartered-college-of-teaching

246. Sherrington, T. (n.d.) *A National Baccalaureate for England*, AQA. Available at: www.aqa.org.uk/about-us/what-we-do/policy/the-future-of-assessment-2025-and-beyond/a-national-baccalaureate-for-england

247. The National Baccalaureate for England: Key Elements table is adapted from the National Baccalaureate Trust's website: Available at: www.natbacctrust.org/core-principles/ [Accessed 26 Oct. 2017)

What is more, it tackles some very specific problems that are inherent to the current system and which are particularly prevalent in schools where provision is tailored specifically to meet the narrow demands of the government's accountability system.

The National Baccalaureate for England: Key Elements ○NBT

The framework for the NBfE can be expressed in very simple terms, allowing for a very wide range of alternative models to be developed to meet the needs of learners in different contexts, whilst always delivering on the core principles and the key capacities of learners.

Essentially the model has **three key elements:**

Core Learning

Subject-based learning Including, but not exclusively, the National Curriculum subjects Formal vocational and academic qualifications from national awarding bodies.

Personal Project

An opportunity to engage in an extended enquiry leading to a significant final product demonstrating a range of skills, knowledge and personal attributes.

Personal Development Programme

A formal programme recording each learner's engagement in a range of activities that complement their core learning. To include an element of service, creativity, physical activity and cultural activity.

This model can be applied at any Key Stage and can be adapted to provide appropriate challenge for students of all levels.

The table below illustrates how the model can be applied to allow schools and colleges of all kinds to deliver a National Baccalaureate for England curriculum. Terminal completion of the National Baccalaureate for England will be awarded at Advanced, Intermediate, Foundation and Entry Levels.

Programme	Core Learning	Personal Project	Personal Development Programme	Completion Award
14-19 Secondary	L3: A Levels, BTECs; L2: GCSEs	Extended Project Qualification L2/L3	100-150 hours of logged activities.	Advanced, Intermediate or Foundation Baccalaureate.
16-19 Vocational/ FE	NVQs, Techlevels, TechBacc ®	EPQ as above, industry-specific project or embedded in qualifications.	100-150 hours of logged activities.	Advanced, Intermediate or Foundation Baccalaureate
Primary	Primary National Curriculum	School -defined personal project – accredited where possible	100 hours of logged activities	The Primary Baccalaureate
Special School	Tailored learning programme according to identified needs.	Centre-defined personal project – accredited where possible.	100 hours of logged activities	Intermediate, Foundation or Entry Level Baccalaureate
KS3 Secondary	KS3 National Curriculum	School-defined personal project – accredited where possible.	100-150 hours of logged activities	Key Stage 3 Baccalaureate.

It creates pathways to meaningful success, and provides an acknowledgement of valuable achievement, for all learners, not just the academic high flyers. It reduces the disproportionate and increasingly nonsensical emphasis on examinations at age 16 at a time when the education leaving age has risen to 18. It gives value to personal development within the curriculum. It locates the issues of examination reliability and validity in a broader context, making it clear that exams don't and can't capture everything schools do that is of value. And it ensures that all students, regardless of what or where they are studying, will get the opportunity before leaving school to undertake a personal project that allows them to explore an area of genuine personal interest.

As to its implications for the character of state-funded education, Sherrington is cautiously optimistic:

"It will be a long haul. We're deliberately starting out slowly; purposefully seeking to build a consensus around the National Baccalaureate from the grassroots, free from the political imperatives inherent in a government-led system. The prize of a fully inclusive, challenging and holistic framework that captures the outcomes of each young person's education in a fully rounded sense is achievable – and has to be worth pursuing."[248.]

Amen to that.

248. Ibid.

5.6 Summary of recommendations

To bear down on gaming, reduce teaching to the test and support schools to focus on education's primary purposes rather than the proxy goals of performance points and league table position, we need to:

1. Create a new culture in educational assessment by:

   - Making tests harder to teach to. This involves attending to the arcane details of test design to increase unpredictability without reducing reliability and validity; using more closed or multiple-choice questions where appropriate; and supporting the effort to refine then promote the use of Comparative Judgement for the marking of essay based exams.
   - Teaching teachers about the dangers of teaching to the test such that they develop a proper understanding of the difference between the sample and the domain and a true appreciation of the centrality of the curriculum to a great education.
   - Helping teachers embrace genuine formative assessment by embedding regular high-specificity, low-stakes testing in their practice for purely diagnostic purposes, with the emphasis on providing useful feedback and identifying helpful next steps.

2. Reform the accountability system by:

   - Making explicit Ofsted's emerging role as the guardian of a broad and balanced curriculum. A counterbalance to the pressures of the DfE's numbers-based accountability system, the body mandated and expected to referee the 'game', looking not only at what schools achieve, but how they achieve it.
   - Making the DfE's assessments of school performance more nuanced and balanced by providing more data about schools, their students and their alumni (so-called 'destinations data').
   - Reweighting league tables to stop the practice of 'off-rolling' low performing pupils. In future, league tables should include the GCSE results of pupils who, for whatever reason, leave between the start of the secondary school and the time they sit their GCSEs 15 terms later. The DfE should allocate these pupils' results to the institutions where they have spent time on-roll in proportion to the amount of time they spent there.
   - Withdrawing the 'right' for schools to act as their own admissions authority, and engage with the RSA's proposed Commission on School Admissions to ensure that the 'low road to school improvement' (manipulating the admissions system rather than improving teaching) is closed.
   - Ensuring all schools receive the high quality and timely external challenge and support they need by creating a comprehensive but contestable middle tier of MATs, local authorities and

others, all of whom will be held accountable for their performance. Middle tier bodies will effectively operate on licence, with the worst performers replaced by new ones.

3. Encourage a teacher-led professional renaissance by:

- Returning the definition of educational excellence to the profession by abolishing the Ofsted 'Outstanding' category and getting the inspectorate focused solely on identifying those schools that are either struggling to meet their students' needs or putting those needs second to their own institutional interests by gaming the system. Schools that are doing neither should be allowed to set their own priorities in line with their own values and vision.
- Supporting and celebrating all grass-roots initiatives designed to improve the quality of schooling and support the wider contribution that schools make to their communities and the wider society. Initiatives like the National Baccalaureate, which seek to broaden our shared definition of education's purposes and essential character, are of particular importance.

Of course policy change and system re-design won't, by themselves, bring about the profound cultural shift that is needed if we are to move decisively beyond the education-by-numbers game. RSA chief executive Matthew Taylor has written about the need for reformers not only to think systemically (to understand the incentives, dynamics and inter-dependencies that drive individual and institutional behaviours within complex systems) but to act entrepreneurially (spotting, then seizing, opportunities to work with different partners, at different levels and in different ways to bring about change).

The RSA, as an organisation that seeks to combine the best of the think tank world with the best of the social change world, is committed to doing just that. With the publication of this report, the emphasis now shifts from analysis to action.

We believe we have now reached the point at which change becomes possible: when the risks of inaction are greater than the risks of reform. The new head of Ofsted, Amanda Spielman, has created an opening. The task now is to seize that opportunity, and prove that change is not only necessary, but possible.

Chapter 6: Education in an age of 'unreason'

Once our schools, and the professional and political conversations about schooling, are no longer dominated by the logic and language of administrative accountability, we can move on to the more interesting and important debate – the debate that mission-oriented school leaders are already engaged in – about how to prepare our young people to thrive in and improve the world.

That world is far more volatile than it was a generation ago. The mass movement of people over recent decades has led to an intermingling of our human tribes that is without historical precedent. While this has enriched us, economically and culturally, it has also brought new dangers – dangers that, in straightened times, should not be underestimated. Hardly a week now goes by without people of different races and religions, backgrounds and beliefs bumping up against each other, pitting the rights and interests of one group against another.

These culture wars are rooted in the politics of identity – the tendency to define ourselves and judge each other by our membership of a group, rather than as individuals; to put our tribal identity before our shared humanity; and to emphasise those things that divide, rather than unite us. And what makes this new identity politics even more dangerous is its confluence with another troubling and growing tendency: to shut down, rather than engage in, debate.

Worryingly for the future health of our democracy, this tendency is particularly strong on our university campuses where an intolerant and censorious strand of identity politics has taken hold, and where, time and again, people are being denied the chance to express opinions that, while sometimes contemptible, are permissible under the law. And with every trigger warning issued, safe space designated and platform denied, so free speech – without which good ideas cannot be promulgated nor bad ones exposed – is further eroded. Those who doubt the size of the problem should read the recent survey of free speech in British universities, which found that nearly two thirds of student unions and one quarter of university administrations got a red rating last year, with only seven universities banning only what is illegal.[249.]

As J S Mill reminds us, this lurch towards censorship and prohibition produces no winners:

> "The peculiar evil of silencing the expression of an opinion is that it is robbing the human race; posterity as well as the existing generation; those

---

249. Spiked Online (2017) *The Free Speech University Rankings.* [online]. Accessed at: spiked-online.com/free-speech-university-rankings/results#.WekUmFtSwdW

who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth. If wrong, they lose what is almost as great a benefit, the clearer perception and livelier impression of truth, produced by its collision with error."[250.]

No one would deny that identity can provide a useful frame for understanding the world and its many injustices, just as economics can. What it does not do – at least not in its current, militant form – is provide a means of bringing people together to improve the world and tackle those injustices. And ultimately, it doesn't because it privileges partisanship over reason.

Here's Sam Harris, the philosopher and neuroscientist, expanding on this point:

"For most problems, and certainly for every problem where identity isn't actually the relevant variable, it represents a moral and intellectual error to speak in terms of identity. I'm thinking of what the writer and philosopher Rebecca Goldstein recently said - she said "to the extent that we're rational, we share the same identity." That really gets to the heart of my concern with identity politics… Rationality is how we fuse our cognitive horizons with strangers who are capable of reasoning in the same way based on the same evidence. So by that measure, identity politics is a failure of rationality.

If I have to pick a side, I'm on the side of someone who's making sense. And the moment a person of my religion or my skin colour or my political party stops making sense, I'm on the side of the person, of whatever religion or whatever skin colour or whatever political party, who points that out. Because error is the problem. Dishonesty is the problem. Confirmation bias is the problem. Delusion is the problem."[251.]

It is a theme picked up by journalist and author Matt Ridley who, describing the potential consequences if we fail to stand up to the censoriousness and intolerance of the new politics of identity, writes:

"Maybe the entire world is heading into a great endarkenment, in which an atmosphere of illiberal orthodoxy threatens the achievement of recent centuries... I am fairly certain that the Enlightenment is not over, that discovery and reason will overwhelm dogma and superstition. But the spread of fundamentalist Islam, the growth of Hindu nationalism and Russian autocracy, the intolerance of dissent in western universities and the puritanical hectoring of social media give grounds for concern that the flowering of freedom in the past several centuries may come under threat. We have a fight on our hands."[252.]

So the battle lines are drawn. Whether our children will choose to join that battle, and if so, on what side, will be determined in our schools. For

250.   Mill, J. S. (1869) *On Liberty*. London: John W. Parker & Son
251.   Harris, S. in conversation with Lilla. *What Happened to Liberalism?* The Waking Up Podcast, Episode 99. Available at: wakingup.libsyn.com/99-the-fate-of-liberalism
252.   Ridley, M. (2017) New enemies threaten the enlightenment, *The Times* [online]. Available at: www.thetimes.co.uk/article/new-enemies-threaten-theenlightenment-6xsj58mhg

ultimately, this is a struggle for the very idea of education and free en-
quiry – for the place of knowledge, reason and reasonableness in society.

That the combination of free speech and rational thought provides the
best, and very probably the only, way of out of the identity-based disputes
that threaten the cohesiveness of our multi-cultural, multi-faith societies,
should be uncontroversial.

But how best to educate for freedom and for reason is, as we have seen,
fiercely contested.

Peter Hyman from School 21 is clear: we need to move decisively
beyond what he describes as a "small education", narrowly focused on
academic study, and replace it with an holistic education that attends to
each child's head, heart and hand, with teaching methods carefully se-
lected to cultivate the skills, capabilities, attitudes and character strengths
Hyman sees as critical to meeting the demands of the 21st century:

> "We need an engaged education… an expansive education… an education
> that is layered, ethical and deals with complexity as an antidote to the
> shallow, overly simplistic debates our young people often have to listen
> to. The best defence against extremism and "illiberal" democracy is an
> education that teaches reflection, critical thinking and questioning."[253]

Other heads I met argue that this emphasis on skills is all well and good,
but meaningless if you don't place sufficient emphasis on, and allocate
sufficient time to, the explicit teaching of knowledge. It is a view neatly
summed up by Richard Russell, a teacher who, in a recent article, argued
that the privileging of skills over knowledge is a symptom of a wider
trend towards post-modernism and relativism, the effect of which has
been to blur the distinction between evidenced fact and baseless assertion
– a gift to populists and other false prophets:

> "Without knowledge, critical thinking is redundant. Knowledge plays a
> key role in debating with – and hopefully changing the minds of – those
> who hold racist, bigoted and ultimately false beliefs. Without some
> knowledge, some acceptance of facts, we're just people with different
> opinions shouting at each other. And it is knowledge of a subject that
> allows people to think critically about the divisive and cynical claims made
> by populists."[254]

I'm sure I'm not the only one who finds myself agreeing with both these
statements, and realising that there is no contradiction in doing so if we
use the Trivium as our frame. For what Richard Russell is talking about is
the vital importance of 'grammar' – of the knowledge, facts, structures
and rules that are the foundations of learning. And what Peter Hyman
is describing is 'dialectics', which recognises that an education that fails
to get beyond the grammar of a subject – that doesn't equip students

253.   Hyman, P. (2017) *It's time for a real revolution in Britain's schools,* The Guardian
[online]. Available at: www.theguardian.com/education/2017/feb/26/revolution-in-uk-schools
254.   Russell. R. (2017) Is the Left's blasé attitude to teaching knowledge helping the far
right? *The Guardian* [online]. Available at: www.theguardian.com/commentisfree/2017/sep/04/
left-teaching-knowledge-far-right-dangerous-populists147

with the reasoning skills needed to interrogate, analyse and debate the knowledge they have been taught – is not one worthy of the name. Add in the art of 'rhetoric' – the opportunity, through performance or presentation, to pause the ongoing battle between the tradition of grammar and the modernist critique of dialectic, and to reflect and share, express and create – and we have Milton's "complete and generous" education and my ideal school.

The RSA (Royal Society for the encouragement of Arts, Manufactures and Commerce) believes that everyone should have the freedom and power to turn their ideas into reality – we call this the Power to Create. Through our ideas, research and 29,000-strong Fellowship, we seek to realise a society where creative power is distributed, where concentrations of power are confronted, and where creative values are nurtured.

RSA
Action and Research Centre