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EDITORIAL

Dr Iro Konstantinou | *Editor and Researcher-in-Residence, Eton College*

The OECD (2019) report on how social, political and economic forces affect education trends is very timely. It poses questions about whether education is about preparing pupils for a future dominated by AI, how an ageing population will cope with lifelong learning, and what the impact of climate change will be not only on schools but also on communities and families. Looking at the bigger picture, the OECD asks educators to think about how globalisation, security, democracy, and modern cultures might shape education in the future and what agendas might inform the curricula. They also acknowledge that technology is so all-encompassing that it permeates all of the above areas they identified as prominent in education worldwide. For our second issue of this journal, we wanted to look into those bigger concepts and provide a variety of viewpoints on how education can be conceptualised and redefined.

We have sought the opinions of academics, experts and teachers. Most importantly, we have engaged pupils in the editorial process and asked them to shape the themes and direction of the journal. They suggested openness and technology as the themes of this issue. Openness refers not only to sharing - resources, expertise, ideas - but also to being open to new concepts, new ideas, and new directions in education. We thought it important to examine openness from a variety of perspectives as a multitude of voices can encourage the dialogue across disciplines and sectors. There are articles which address openness in leadership, classroom practice, interdisciplinary experiences, and more broadly the ability to reflect within one's context. This might be through informing practice with evidence, being open to new ideas, or simply having constructive dialogue with others. Underlying these discussions is the ubiquity of technology and how it can be used in a way which can enhance the educational experience of pupils while minimizing its negative effects.

The introduction of a such a multi-dimensional journal is always difficult to write. We decided to start by getting the opinion of two experts in their respective fields: professors Chris Brown and Alex Hill. Chris Brown discusses the shifts occurring in the landscape of education as more teachers, schools, and countries engage with educational research. Alex Hill gives his opinion why schools face so many challenges today and encourages collaboration. He also gives his views on why openness in education can have a positive impact not only on the individual institution but across schools.

Chris Brown, Professor of Education, University of Durham

A trend we see across the world is research engagement by teachers across educational contexts. In some countries this is a top-down approach, in some others it is teachers who drive this initiative. Apart from the measurable benefits, which include attainment and better results, there are more nuanced and perhaps interesting benefits. Teachers tend to want easy answers to the problems which arise in their classrooms. However, we have found that those who engage with research and evidence tend to reflect more, try new things out, and think about their context in some more depth. This also means that not all research will be relevant in some contexts and there are no easy solutions and fixes that can be found in the evidence. It is through reflection and trying things out that the answers to the questions can be found. What we have also found is that engagement with research and evidence gives new ways of thinking about concepts and pedagogical practices. It increases teachers' knowledge and makes them more satisfied in their workplace, which means that there is better retention.

However, for this engagement to happen teachers need to be given the time for that by senior leaders and there needs to be a culture shift at the school. In our research, we have found three processes which can facilitate research engagement in schools:

1. Formalisation: where research engagement is formally embedded in the school culture.
2. Prioritisation: capacity is created for teachers to be able to engage with research which can be quite dense. Blogs, podcasts, professional learning communities are all great ways to do that.
3. Mobilisation: such ideas circulate across the school and across departments and teachers. Creating networks of people who are responsible for making these ideas flow can make this happen.

Alex Hill, Professor of Operations Management at Kingston University and Director of The Centre for High Performance

With the work we did with schools we found that headteachers had very strong opinions about how you can change schools, and those opinions were very biased. We have found that what educationalists need to do if they want to bring about change is not to look at their situation in isolation but realise that what happens in their schools might be the same as what happens in other schools, and they can learn from that. People can understand that their context is not unusual and there are people doing very similar things.

Schools also need to promote critical thought. This can show the best way to understand the problems and how to solve them. Very often the subjects pupils study are less important than how they study them. In a school environment too often the pupils' experience doesn't broaden beyond the subjects they learn. Sadly, schools tend to be worrying about their ranking and are not given the freedom to do some things which are more important. From what we have observed, education and health are the most stressful environments you can work in. The level of scrutiny, pressure and commentary that goes on is very high, which makes people nervous in those professions. Most of the people commentating, however, have no experience of being in a school and it is very easy to be idealistic. The ideal is very compelling and very hard to argue against, but is not real. This creates challenges for schools. However, by letting pupils explore subjects in more depth and giving them the opportunities to develop critical thinking, you end up with a more well rounded student body.

For example, what we found interesting at Eton is that there is so much autonomy, which is given by the great facilities and by the fact it is a boarding school. We analysed the use of time and during the school year, only 20% of the pupils' time is spent in the classroom. 80% is education which is not in such a regulated environment. This is what we have found makes a very big difference in what pupils are able to explore outside the classroom. But for many schools the entire focus is on that 20%, and very often they also have to cut subjects. This is when the richness is disappearing.

In terms of the theme of your journal, openness within an institution, we have found that this is a really important aspect across high performing institutions. Firstly, it creates challenge. They do a lot of their work in public view but also physically let people from the outside come in and watch them do their work. Their work is incredibly open for everyone to see. For example, Eton is like a village; it is not tucked away somewhere out of sight. Because of that you might feel the pressure to do everything better and perform at a different level. Also, there is an openness to sharing things, which seems to build trust. If people know what you are doing and why you are doing it, they are more likely to trust you. And if you want to sustain success over time you need to have the support of others.

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LOOKING AT THE BIGGER PICTURE, THE OECD ASKS EDUCATORS TO THINK ABOUT HOW GLOBALISATION, SECURITY, DEMOCRACY, AND MODERN CULTURES MIGHT SHAPE EDUCATION IN THE FUTURE AND WHAT AGENDAS MIGHT INFORM THE CURRICULA.

DIVERSITY AND OPENNESS: THEORETICAL PERSPECTIVES

Following the interviews with Chris Brown and Alex Hill, we invited a number of experts, thought leaders and those in a position to make changes in their context to contribute their own ideas on how openness and diversity can be realised more broadly. Alison Peacock writes about the vision of the Chartered College of Teaching in promoting diversity across the teaching profession. Ian Warwick invites us to have an open mind and to learn from Leonardo Da Vinci's genius. Bill Lucas questions the term 21st century skills; he invites educationalists to reconsider the use of the term and how these skills can be redefined and used in a way which is all-encompassing. Kevin Burden asks whether mobile technologies are causing as much disruption as we might think and discusses empirical evidence. Jonnie Noakes invites experienced and inexperienced teachers alike to engage with research and evidence, and to keep an open mind as to what educational research has to offer classroom practice, through a summary of evidenced-based pedagogical approaches. Lastly, Tom Arbutnott gives us insight into successful independent-state school partnership initiatives which will enable pupils from diverse backgrounds to access university education. We conclude by giving an example of such a partnership in action with the Eton Aspirations Project, a mentoring initiative by Eton boys in Years 12 and 13 who have spent a year running a project with younger pupils at Holyport College in Berkshire.

BUILDING TEACHER PROFESSIONALISM: TOWARDS GREATER DIVERSITY THROUGH COLLEGIALITY

By Professor Dame Alison Peacock | Chief Executive of The Chartered College of Teaching

The Chartered College of Teaching opened membership in January 2017. This independent membership body, initially grant-funded by government, with a Royal Charter, has huge ambitions for teachers everywhere. As a Professional Body, the first of these is to help teachers recognize why they need such a Body in the first place. Very different from teacher and leadership unions, the Chartered College of Teaching seeks to become a Royal College ultimately and to work with teachers across the world as a global teaching profession.

The decision was taken as the College was established that it should offer inclusive membership to teachers from both state and non-state schools and to those who work in all areas of education. Membership of the College is free to all those studying to become teachers and has a very modest annual or monthly fee for all others. Whilst enabling as many teachers as possible to join us we are also clear that we should be providing recognition to those who choose to build their expertise within the classroom via achieving chartered status. Those who contribute a great deal to education throughout their life are also able to apply for recognition as Fellows.

Why does all of this matter? Well, currently there is often a marked lack of pride amongst teachers. Demanding recognition and higher status is ineffective and does not meet with sympathy. However, achieving recognition through work that is transformative feels important. We are keen to grow membership beyond England across the UK and become globally recognized. Chartered Teacher status (CTeach) offers assessment against a very high standard. In our first cohort, of one hundred and fifty teachers rigorously selected to participate, only approximately one hundred actually achieved this status. We are currently preparing to run a pilot study internationally with British teachers overseas and we are also talking with the Commonwealth and with the Department for International Development about how we can make CTeach the first global status for teachers across the world.

To become a Chartered Teacher is to achieve recognition for impact in the classroom. The standards of professional knowledge, professional practice and professional behaviours that teachers are assessed against are both forward looking and rigorous. As a Professional Body, we believe it is an essential part of our role to set ambitious standards for teachers and also for leaders. This is an essential part of a self-regulating profession that ultimately seeks to bring inspection against these standards at school level within its realm. In the interim, we are working with the National Association of Headteachers to learn more about models of peer review as a means to break the hyper-accountability cycle.

We wish to enable our teaching profession to reflect a more diverse society and believe that through working together and showing examples of this we can truly begin to make a difference. The Secretary of State, Damian Hinds, recently attended a Saturday conference, 'Break the Cycle: Generating Racial Equity in Education Leadership' to speak at the launch of a series of actions and events to support black and minority ethnic teachers to consider leadership. Joan Deslandes, FCCT, Headteacher of Kingsford Community School, Newham, London, is a member of our Council and a keen advocate. The Chartered College is committed to supporting this agenda. The statistics for equality in leadership do not reflect English society. Less than forty black secondary headteachers were appointed to post when the most recent census data was shared (DfE 2018). However, almost a third of pupils attending schools come from non-white families (DfE 2018). Role models and examples of adults within education who show children what can be achieved by people who look similar to them need to improve dramatically. Initiatives such as this and BAMEEd CPD provide opportunities for alternative voices to be heard and to gain recognition.

AS A PROFESSIONAL BODY, WE BELIEVE IT IS AN ESSENTIAL PART OF OUR ROLE TO SET AMBITIOUS STANDARDS FOR TEACHERS AND ALSO FOR LEADERS.

Similarly, the WomenEd movement, ‘10% braver’, has begun to attract international attention. The fact that women make up the majority of the teaching workforce is not reflected in numbers of women leaders in education. Vivienne Porritt, leader of WomenEd, is also Vice President of the Chartered College of Teaching. Together these organisations can begin to challenge the status quo.

When there were recent protests in Birmingham by parents resisting education within schools about homosexuality the Chartered College spoke up about the right of teachers to make decisions about what and how to teach. This is at the heart of what it means to behave as a professional.

The Chartered College of Teaching seeks to unite colleagues through a greater sense of collegiality. There are many pressures on teachers across the system at present. Collegiality is at the core of professional behaviour. We are keen to help teachers across the system to see how working together, sharing classroom practice and leadership within a spirit of kindness and collaboration is of benefit to all. Through writing for our peer-reviewed journal *Impact* teachers are proud to collaborate and share practice alongside research academics. For the first time, we are genuinely trying something new that does not rely on anyone other than the individual collegiate teacher wishing to share practice.

If you would like to join our community of teachers and leaders please visit our website www.chartered.college We are doing something groundbreaking. Nowhere else in the world is there a charity that seeks to build professional recognition for teachers in this way. We want to welcome everyone so that we can learn from each other and improve our profession from the grass roots upwards. We want to enable colleagues to celebrate their role in society and to engage in learning that is fulfilling and lifelong. In this way, we seek to make the difference for all our teachers, and consequently for all our children and young people globally.

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LEARNING WITH LEONARDO

By Ian Warwick | Senior Director of London Gifted and Talented

It's all too easy to think of Leonardo Da Vinci as a man touched by some divine lightning. This is not that helpful. Our interest is more pragmatic. Disadvantaged by his illegitimacy and poor education, how did he go about actually earning his genius across so many disciplines? What specific techniques did he use to steer himself towards originality? What approaches drove his inventive thinking, and how can we still use them to improve our own learning exactly 500 years after his death? In short, how can we recreate his insights meaningfully for ourselves in the twenty-first century? What we can learn from him is not some foggy, semi-mystical idea of inspiration, but something far more immediate and urgent.

Conscious Ignorance: Developing a beginner's mind

This is predicated on a commitment to question what we think we know and believe, as a prelude to the way we think about the present, about lifetime to come and about our own learning. Leonardo let go of beliefs and attitudes acquired at earlier stages of his learning and gave himself the confidence to abandon his expertise, to embrace doubt and resist conclusions. The physicist James Clerk Maxwell made the point that a thoroughly conscious ignorance is the prelude to every real advance in science. Feynman adds that in order to make progress, one must leave the door to the unknown ajar.

Regaining Wonder: Developing the fuel of enthusiasm

Knowledge fuels understanding, wonder fuels curiosity. As Montaigne said, wonder is the foundation of all philosophy, and inquiry its progress. Leonardo's call to think is a call to wonder and to wander beyond the safe limits of what we know and what we think we know. His profound feel for nature's patterns and crosscurrents opened up his need to find a deep connected unity. When we ask questions, doubt is a requirement. His notebooks show his rampant curiosity in action, reined in by dogged investigation and experimentation. Diverse curiosity is to learn scatteringly and to trace how such foraging for knowledge and experience might evolve into encounters with unexpected meanings.

Perfecting Attention: Developing a sensory approach

Obsessive noticing and recording of every detail were Da Vinci's hallmark. He interrogated reality through his senses, marrying the concrete and the abstract, the intuitive and the cognitive, pursuing what Simone Weil calls the formation of attention. It's about the importance of real experience fed through rigorous analysis and then reimagined. He was concerned not just with appearances but with the underlying causes of those appearances. He urges us by implication to do the same.

Unnecessary Beauty: Developing the dialogue across disciplines

Da Vinci's blended knowledge of science, geography, mathematics, architecture, optics, and music illustrates perfectly his drive to collaborate with like minds. He set up 'collisions' between ideas, opened the gates between the conscious and the unconscious, allowing it to become a matchmaker across his fields of study, blurring the boundaries between art and science, reality and fantasy. As Arthur Koestler points out, all decisive events in the history of scientific thought can be described in terms of mental cross fertilisation between different disciplines, in a connective space where ideas can be aired and argued about by people with diverse interests.

Thinking Aside: Developing a metaphoric perspective

Leonardo believed in the laws of continuity, the drive to integrate, to find patterns, open the doors to hidden analogies and ultimately uncover solutions. Modern scientists make a similar point about flashes of insight and explosions of likeness. Metaphors shift the focus from the central to the peripheral, embracing the capacity and confidence to allow new salencies to arise. Feynman asserts that what is not surrounded by uncertainty cannot be truth. Such thinking allows us to shrug off apparent contradictions and to acquire in exchange a greater fluidity and versatility. This temporary liberation from the axioms ingrained in the very texture of specialised ways of thought are essential for the creative leap.

Negative Capability: Developing productive frustration

Keats urges an acceptance of life's mysteries and doubts because they are of far more use than fact and reason. Sfumato was Leonardo's technique of blurred boundaries and elusive edges: painting as a process of searching, in which the artist aims to discover the image in the course of making it, a technique that carries with it the idea of constructive ambiguity – the power of the undefined limit. Confusion and uncertainty can offer a fresh perspective, a more liquid network where the elegance of meaningful complexity plays a significant role in the learning process. In a world that seems to value prescribed learning, flat-pack opinions and sameness, it requires the sort of courage that looks on ambiguity as a desirable intention and encourages questions that ripen, via deferral, into genuine interests.

Unfinished Perfection: Developing sustained irresolution

Leonardo's belief was that we need to sustain the conflict inside us, not try to resolve it. The layering in Leonardo's paintings is not just about perfectionism, it is about the realisation that the questions about what things look like, and more importantly, what they mean, never come to an end. His belief was that we need to sustain the conflict inside us, relish a world in flux and not try to resolve it. Isaacson argues that innovation requires a reality distortion field. We need to overcome the psychological barriers that can impede us from looking beyond the existing order to imagine something that completely reframes what has happened before. Creativity then becomes the means of discovery in an endlessly unfolding story that rarely reaches a last page conclusion.

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WHY WE NEED TO STOP TALKING ABOUT TWENTY-FIRST CENTURY SKILLS

Dr Bill Lucas | Professor of Learning and Director of the Centre for Real World Learning, University of Winchester

Imagining futures

twenty-first century

adj. 2. characteristic of the imagined conditions of the twenty-first century.

Oxford English Dictionary (OED)

It's a characteristic of human beings to want to look ahead and think about what might happen next. Indeed our capacity to anticipate and plan for new experiences is, at least in part, why we have evolved as a species so successfully. So it was entirely natural that, as the year 2000 dawned, with all the extra bezazz of it being a millennium milestone, the futurists got to work. Driven by genuine uncertainties about the opportunities afforded by the invention of the World Wide Web in the 1980s, speculation about what this might mean for society in general and schools in particular was rife. In 1998, Google was invented and the two decades which followed saw the birth of Facebook (2004), Twitter (2006) and Instagram (2010). Surfing on this wave of human inventiveness were and are the many tech companies which enable these digital breakthroughs to flourish. The marketing device to create the necessary sales climate in education was the idea of 'twenty-first century skills'.

According to the OED the first use of the phrase 'twenty-first century' was by novelist Dick Barton in 1964, but with the sense that it has when linked with 'skills' its earliest outing was by the Royal Society of Arts in London in its journal in 1980 in the sentence, 'Everyone in the country must adapt to twenty-first century living and working patterns.' For the last four decades the phrase 'twenty-first century skills' has become ubiquitous. At its core, twenty-first century skills suggests three things:

1. that there are some skills that are especially relevant to the twenty-first century
2. that, by implication, these skills are different from those which we needed in the twentieth century, and
3. that these skills are somehow relevant for a whole century.

Commonly identified twenty-first century skills include critical thinking, creativity, metacognition, problem-solving, collaboration, motivation, self-efficacy, consciousness and perseverance (Lamb et al., 2017). Over the past decades 'twenty-first century skills' has become widely and uncritically accepted: an educational meme. The phrase has gathered many associations with it including ideas that:

- a digital, technology-driven world requires some pupils to learn new skills
- classrooms in schools no longer have walls given the global reach of technology
- with technology knowledge is much less important if it can be acquired by searching the Internet
- direct instruction by teachers is no longer relevant
- in a world with so much data available knowing too many things might be a waste of cognitive space
- that learning is life-long more than it is school-based.

The idea of twenty-first century skills both delights and infuriates.

As a thinking frame for considering the role of schools in rapidly changing times, it seemed helpful at first, seemingly inviting educators to ask profound questions about education. However, not distinguishing between skills which are eternally useful as opposed to those which are legitimate responses to the world we live in now is lazy thinking. A legitimate concern about what skills students might need today has gradually morphed into a mantra and, more recently, into an uncritical movement. The danger with this mutation is that the words have acquired an evangelical fervour and started to put off the very people who need to be considering their role today, the majority of thoughtful teachers across the world. For this group twenty-first skills can seem jingoistic, simplistic or distracting.

A particular problem here is the language of skill. At its simplest a skill is a ‘learned capacity to do something useful’ (Lucas and Claxton, 2009). But the word skill can somehow seem too unsubtle a concept to distinguish between, say, tying your shoelaces or judging the relative veracity of a primary historical source and a Wikipedia entry. For this reason the notion of ‘wider skills’ (ibid.) seems helpful. It is suggestive of lifelong value, something which might be of use in different contexts. A decade later the Brookings Institute is using a similar idea in talking of the need for a ‘breadth of skills’ (Kim et al., 2017).

Those using the idea of twenty-first century skills are often reaching towards the idea of wider or broader skills. But at the same time as the phrase has been in use the world has witnessed an extraordinary proliferation of words and phrases seeking to capture these elusive concepts. These include - alphabetically - ability, attribute, capacity, capability, character, characteristic, cognitive skill, competence, competency, cross-functional skill, disposition, habit of mind, non-cognitive skill, skill, soft skill, trait, transferable skill, transversal skill and wider skill.

THOSE USING THE IDEA OF TWENTY-FIRST CENTURY SKILLS ARE OFTEN REACHING TOWARDS THE IDEA OF WIDER OR BROADER SKILLS.

Each term comes freighted with associations. Recently the Organisation for Economic Cooperation and Development (OECD), (OECD, 2016), has offered a model of education for the decade ahead which seeks to show the relationships between knowledge, skills, attitudes and values (Figure 1). In the OECD model, knowledge, skills, attitudes and values are seen as interconnected and interacting to produce competencies. Capabilities or competencies are, in effect, knowledge, skill, values and attitudes in action.

Of particular note in the OECD model is the recognition of the nuances within the words knowledge and skills. Knowledge is explicitly interdisciplinary as well as disciplinary. Skills are cognitive and metacognitive as well as being social and emotional. Both knowledge and skills have a practical component.

If the language of skills is unhelpful, so too is some core thinking behind their association with the twenty-first century. Reaching a consensus as to what is likely to be different in the coming years is contentious territory. But most commentators agree about some of the main trends. These include:

- 1. the increasing complexity of problems such as climate change, global migration and growing resistance to life-saving drugs
- 2. the ubiquity of data; it was never possible for schools to teach everything and these days they are selecting from an ever-expanding menu, as a consequence of the Internet
- 3. the proliferation of knowledge sources from the Internet and wider digital world
- 4. the increasing interconnectedness and global nature of our relationships
- 5. the potential of automation via Artificial Intelligence and its impact, often contested, on life and work
- 6. increased self-employment
- 7. an ageing society.

In direct response to each of these elements it can be argued that the kinds of capabilities, competencies or dispositions that we need are likely to include:

- 1. complex problem-solving that is frequently multi-and inter-disciplinary by nature and always ethically driven
- 2. critical thinking and high level project and time-management
- 3. digital literacy, design and computational thinking
- 4. intercultural collaborative problem-solving and emotional and social intelligence
- 5. creativity, adaptability, meta-cognition
- 6. creativity, communication, adaptability
- 7. learning to learn.

While the debate about twenty-first century skill has been going on, a quiet consensus has been emerging about the kinds of dispositions which young people need to get on at school and beyond. The following five lists are indicative (Table 1).

Each of these seven or so wider skills or capabilities frameworks has been drawn from research from fields spanning employment, technology, education, psychology, education and the learning sciences. There are many more and these five are illustrative only. The point of including them is simply to show the considerable overlap which exists.

So what is different or noteworthy about the century into whose third decade we have nearly slipped? And how might these dispositions be redefined or made more useful for dealing with current challenges? Using the most recent of the five frameworks (Lamb, 2017) as an exemplar, they might be refined as follows:

Critical thinking - The proliferation of digital data often with unclear affiliations and uncertain reliability makes critical thinking even more important than it always has been from the days of the newspaper and the street corner soap box.

Creativity – Complex problems and an increasingly self-employed workforce call for fresh, innovative thinking, the making of new connections. Creative thinking leads to the generation of financial and human capital; it is a core differentiator between human beings and increasingly smart machines in a world where AI is exercising ever more influence.

European Key Competences for Lifelong Learning, 2007	Pellegrino and Hilton, 2012	Gutman and Schoon, 2013	Heckman and Kautz, 2013	Lamb et al., 2017
Communication in mother tongue Communication in foreign languages Digital competence Learning to learn Social and civic competences Sense of initiative and entrepreneurship Cultural awareness and expression	Critical thinking Information literacy Reasoning Innovation Intellectual openness Work ethic Conscientious-ness Positivity Communication Collaboration Responsibility Conflict resolution	Motivation Perseverance Self-control Metacognitive strategies Social competencies Resilience and coping Creativity	Perseverance Self-control Trust Attentiveness Self-esteem and self-efficacy Resilience to adversity Openness to experience Empathy Humility Tolerance of diverse opinions Engaging productively in society	Critical thinking Creativity Metacognition Problem-solving Collaboration Motivation Self-efficacy Conscientious-ness Perseverance
Table 1 – Skills for a lifetime of learning				

Figure 1 - The Future of Education and Skills: OECD Education 2030 Framework



ARE MOBILE TECHNOLOGIES IN SCHOOLS REALLY DISRUPTIVE?

Dr Kevin Burden | *Professor of Educational Technology, The University of Hull*

Metacognition – Thinking about how we learn in a range of contexts is essential if we are to be active learners beyond school and to improve our own capabilities throughout our lives. Being able to learn whatever we want to throughout our life is more important the longer we live.

Problem-solving – The kinds of problem-solving we need today calls for deep inter-disciplinary and inter-cultural understanding and the ways in which individuals and teams across the world can use both online and face to face interactions to work with complex challenges.

Collaboration – Without collaborative working we would not, for example, have created the Hadron Collider or unravelled the human genome. Neither will we be able to think through how to deal with complex issues like climate change or food security or the migrations resulting from wars and economic depression. It is axiomatic that complex or ‘wicked’ problems call for collaborative and interdisciplinary working as well as deep knowledge of one or more domains.

Motivation – Seeing a goal through to its conclusion or at least to a next stage has always been important; these days the opportunities for distraction are enormous, not least from social media. Recent research by McKinsey using the extensive PISA student database found that ‘calibration motivation’, ‘the ability to identify what motivation looks like in day-to-day life (including doing more than expected and working on tasks until everything is perfect)’, is even more important than home background in predicting achievement (Denoël et al., 2017).

Self-efficacy – A learner’s belief in their own agency, along with motivation and self-regulation, is of timeless importance. What has changed in the last few decades is our recognition of its importance and better understanding of the mechanisms by which it works. Carol Dweck (2006) has shown that ‘growth mindset’ is central to good learning. The belief that mistakes are a good thing, prototypes or early drafts on the way to a better performance represents a significant shift in our understanding. Dweck’s research has shown us that what matters is to focus on the way learners deploy their discretionary effort, on their learning strategies.

Conscientiousness – This personality ‘trait’ has historically been strongly associated with achievement. Perhaps because it is one of the ‘big 5 personality types’ it is sometimes seen as fixed or heritable. In fact the best estimate of its heritability is 40-50% (Roberts and Jackson, 2008), meaning that it is very much something that is learnable.

Perseverance – One of a large number of important attributes associated with tenacity (Lucas and Spencer, 2018) including persistence and grit, this has a long association with successful learning. What has changed is the way in which it has moved from being thought of as something largely inherited to a disposition that you can learn and develop. Historically many schools have used ‘achievement’ and ‘effort’ as the two ways in which they report to parents

on their children’s progress. Increasingly, we will need to focus more on how rather than whether learners deploy their effort, to notice the strategies they use to persevere in the face of difficulty.

While the problem of loose wording remains with the continuing use of the twenty-first century tag, the focus on transferring different kinds of knowledge being the distinguishing element is interesting. Using something you have learned in another context to help you answer questions and solve problems is certainly useful, as is the emphasis on learning transfer more generally. But the use being suggested (answering and solving) is strangely limited. Why not challenging, critiquing or questioning, for example?

As we move through 2019 we need a precision of thinking about language and pedagogy as well as a willingness to identify areas of further enquiry rather than technology-led and largely rhetorical discussions about twenty-first century skills.

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The launch of a 1:1 iPad initiative at Eton College reflects a significant pedagogical shift that is occurring around the world as educators seek a more personalised and customised learning experience for students that also embraces greater opportunities for collaboration and authentic learning, mediated through the affordances of a personal mobile device (Kearney, Schuck, Burden & Aubusson, 2012). However, this trend is not without its critics. These include parents, teachers, schools and government organisations with concerns that include off task behaviors associated with the use of mobile devices in class, bullying and other forms of inappropriate behavior, privacy and security issues and fears that learning will be ‘dumbed-down’ when students have unfettered access to a limitless amount of information that is unregulated and of uncertain veracity. Indeed in countries including France, parts of Australia (e.g. New South Wales) and the UK (see: <https://www.bbc.co.uk/news/uk-politics-47095053>) this dystopian narrative around mobile devices has persuaded politicians to ban or significantly curtail the use of these technologies in schools and colleges on the grounds they challenge traditional practices and structures upon which education is predicated.

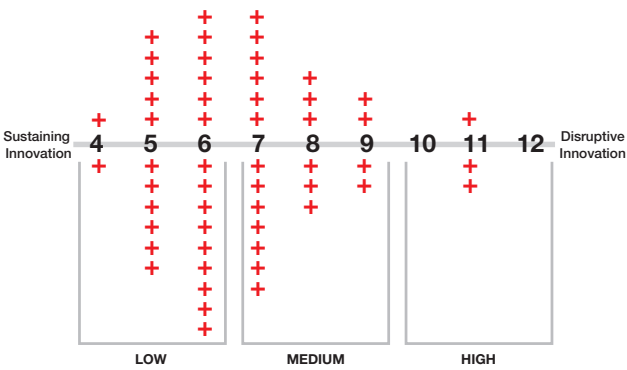
My own research, and that of my international collaborators, takes a different stance. We are interested in exploring to what extent the introduction of mobile devices has actually disrupted the traditional practices and paradigms of teaching

and learning in schools and colleges, and our studies suggest the answer is: not very much! (Burden, Kearney, Schuck & Hall, 2019). I should add the caveat that our research distinguishes between what we term micro and macro level disruptions and we readily accept that on the micro or individual level, mobile devices, and phones in particular, can be a cause of irritation and concern for teachers and parents alike (Kearney, Burden and Schuck, 2019). However, at the macro level, when we investigated the impact of mobile technologies on what constitutes the structures and practices of schooling, such as the curriculum, the timetable, relationships between students and teachers and the dominant pedagogical practices, we discovered relatively little disruption or radical innovation.

In a recent study we undertook a rigorous and extensive systematic literature review (SLR) to identify instances where the adoption and use of mobile technologies amongst school-aged students (4-18) had actually disrupted or transformed the traditional landscape of schools. We identified and read hundreds of research studies exploring small and large-scale mobile initiatives in schools and non-formal settings, and eventually narrowed our search down to 57 studies which met all of our criteria*. In all of these studies we identified varying levels of innovation or change and therefore developed the following criteria to help us rank these in order of disruption and transformation which was our goal:

Criteria	Example
1. The purpose of learning	(e.g. the curriculum; learning objectives, etc. and/or the nature of the task/activity and/or the embeddedness of mobile learning)
2. The context of the learning	(e.g. the place or time in which learning is undertaken; pedagogical practices; mode)
3. The role of the teacher/educators and their relationship with the students	(didactic; involving communities other than school)
4. The role of the learner	(agency, passive)

Table 1: Criteria for identify innovative mobile learning pedagogies



Applying these criteria to the 57 studies we had identified as innovative, we concluded that only 3 of these were genuinely disruptive, referring to them as disruptive innovations. The remaining studies exhibited elements of innovation and change but none challenged the status quo or underlying paradigms of schooling and we referred to these as ‘sustaining innovations’. The full results can be seen in Figure 1 to the left:

What is disruptive about mobile technologies?

Since only 3 studies met all of our criteria for disruption we should be wary of over generalising or extrapolating too extravagantly from such a small sample. However, these 3 studies are interesting and revealing case studies that may be informative in a number of ways for institutions like Eton College introducing a 1:1 initiative.

In each of these three studies students used their mobile devices to undertake tasks that might have been difficult or even impossible without them. This highlights an often-neglected tendency in formal educational contexts to use mobile devices to replicate tasks and activities that could, and perhaps should, be undertaken by a tethered technology like a PC. An example would be the use of geo-location data, built into most mobile devices, to record and tag fieldwork data in situ, rather than the normal laborious process that involves transposing written records into a digital format on a map.

MOBILE LEARNING CAN BE DISRUPTIVE AND SCHOOLS NEED TO CONSIDER CAREFULLY THE CONDITIONS AND STRATEGIES THAT WILL MAXIMISE THE POSITIVE POTENTIAL OF THESE DEVICES WHILST MINIMISING THE RISKS.

A second feature common to all three of these studies relates to the purpose and context of learning. All three involved the local and wider community and were not bounded within the physical context of a classroom or the traditional relationships between teachers and students. For example, in one study students used an app called Wandering to create location-based learning objects that were situated in their local community such as a local heritage tour or information sheets to help non-native speakers comprehend local landmarks. The local community was frequently used as a resource for learning in these studies which included tapping into local knowledge and expertise about subjects like the environment, heritage and culture rather than relying simply on the teacher's own knowledge and networks.

The role of the teacher and his or her relationship with students was also noticeably altered in these 3 studies. Teachers mentored and facilitated student learning in highly authentic and meaningful tasks but there was little or no formal, didactic teaching that characterises traditional schooling. In some cases, such as a civic health promotion project, there was no teacher at all. In this community-based project young people used their mobile device and a mapping and SMS platform called Streetwyze to undertake and mobilise public support for research around waste food and health, resulting in a food revolution in East Oakland, San Francisco where the project was located.

Finally, in all three studies students exhibited high levels of personal agency when they used their mobile devices to undertake these tasks. In one of the studies, for example, students used a mobile game application called HeartRun to learn about and become more skillful in cardiopulmonary resuscitation training (CPR). The simulation presents students with a bewildering plethora of messages and information that mirror the real-world complexity of this scenario and requires them to make decisions and choices quickly and without the assistance of a teacher. In another study, where students were invited to create location-based learning objects for the local community, they were granted full autonomy over what these objects should be, where they should be located and how they would be monitored. This goes well beyond choices about how or where students undertake activities using a mobile device because it gives them jurisdiction to identify what they learn, not simply how.

Conclusions

Although the examples referred to above are at the extreme end of the innovation continuum in terms of mobile learning (see Kearney, Burden and Schuck, 2019), all of the studies that we identified in this review contained elements of innovation and we conclude that schools and colleges could fruitfully cherry-pick the features in innovative mobile learning to move beyond traditional practices and uses of digital technology for learning. Feasible innovation of this nature is incremental but it does set a direction of travel for schools embarking on the mobile learning journey that is forward looking and dynamic. To support institutions in this process we have identified a set of principles for teachers (and students!) to design innovative mobile learning tasks and activities and rubrics to evaluate their impact (see Figure 2 below).

As part of a European research project, academics from five universities around the world are currently developing a mobile app and an online course that will encapsulate all of these principles and design processes (see www.deimpeu.com).

In conclusion, mobile learning can be disruptive and schools need to consider carefully the conditions and strategies that will maximise the positive potential of these devices whilst minimising the risks. Our research suggests that students are more engaged and stimulated when they are encouraged

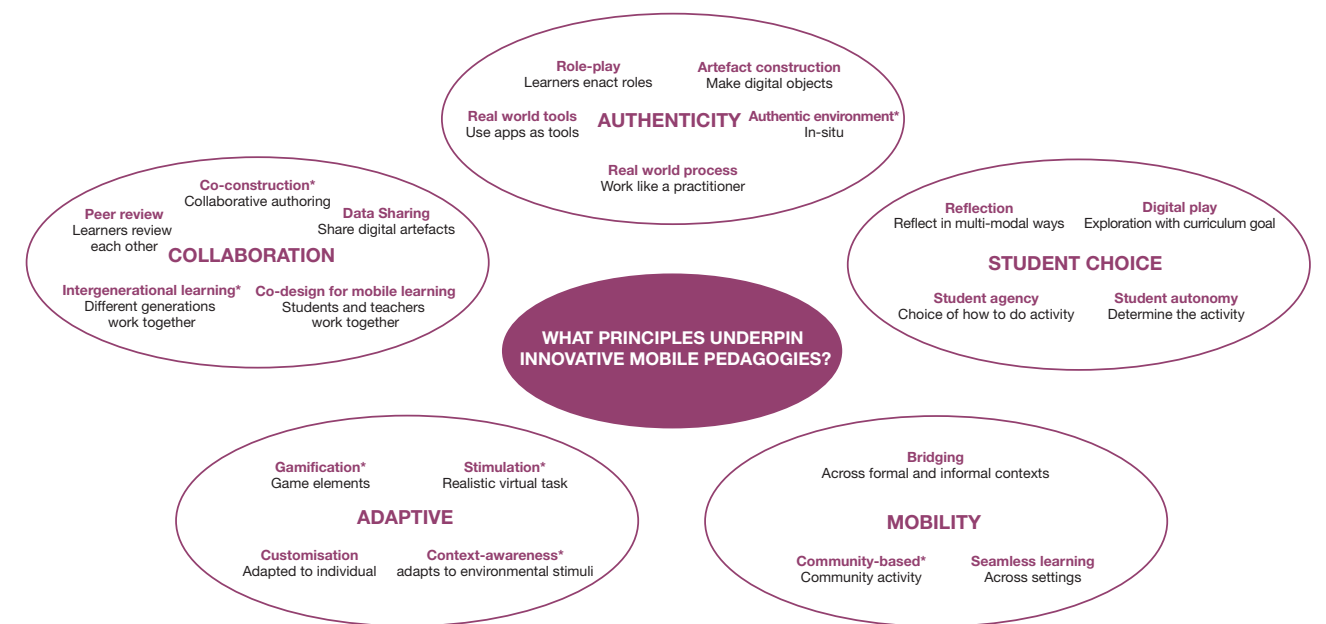
to use their mobile devices to push at the boundaries of traditional pedagogical practices; and the introduction of a technology initiative, such as that taking place at Eton College, should be accompanied by a rigorous and transparent evaluation of what makes learning different, not just more effective or efficient.

*Criteria for inclusion in the study

- Published in English
- Published from 2010 to 2017
- The SCImago journal ranking (SJR) is in the top two quartiles
- Targets school-aged learners
- Follows empirical research methods
- Is focused on innovative pedagogies and mobile technologies

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* Denotes principles located in more than one cluster.

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PRINCIPLES OF EFFECTIVE TEACHING: WHAT DOES THE EVIDENCE SAY?

Jonnie Noakes | *Director of Teaching and Learning and Director of the Tony Little Centre, Eton College*

The factors that impact most on pupils’ learning are the quality of teacher instruction and the depth of teacher subject knowledge (Coe et al., 2014).The latter includes understanding both the discipline and how pupils think about it, including their most common misconceptions. High quality teaching requires judgment, skill and practice. Dylan Wiliam (2011) claims that teaching ‘is so difficult and complex that one lifetime is not enough to master it. All teachers, no matter how experienced, can fail; and all can improve.’

Teachers are now supported by a growing body of evidence about how pupils learn and which teaching methods have the most impact on their learning. The term ‘evidence-informed practice’ refers to the idea of complementing but not eclipsing teachers’ professional expertise with the best available evidence. The benefits of doing this include improved teaching techniques and improved outcomes for students (Churches and McAleavy, 2016). That said, ‘the question of what teaching practices are shown by research to be effective remains contested’ (Coe et al., 2014). Research evidence about teaching and learning can be problematic: the available evidence can be thin, contextual factors are often important, and research can be divorced from teachers’ practice. Interpreting the evidence accurately and applying it correctly are not easy tasks.

This does not mean that we cannot learn from educational research. Dr Karen Taylor (2018), Director of the Institute of Learning and Teaching at the International School of Geneva, argues that ‘There is a broad range of literature that seeks to define learning, and there appears to be general agreement on certain essential elements:

1. learning is social and relational, not just in terms of the relationship between student and teacher but in relation to the learning environment and the extent to which it promotes discussion, collaboration and debate;
2. learning takes place best when it involves reflection, self-assessment and metacognitive awareness;
3. motivation, readiness, and emotion all play a role in learning;
4. learning is enhanced when organized around essential ideas and concepts of the disciplines;
5. learning takes place best in context;
6. deep learning occurs when students can apply learning to new situations.’

If we can get some good ideas from the literature about what constitutes learning, what can we glean from the literature about generic principles of effective teaching? Below I summarise the available evidence from a number of sources, which themselves draw both from research and from what expert teachers have found to work.

Understand what motivates pupils

Pupils are more motivated if they believe that their abilities are not fixed but can be improved through practice (Deans for Impact, 2015). Focus on the methods pupils use rather than on their ability, and encourage them to focus their efforts on improving the process they are using. Tap into what interests pupils to foster intrinsic motivation, since this has better long-term outcomes than using extrinsic motivators. Explain to them the importance and value of what they are doing, acknowledge any difficulties they are likely to experience, encourage persistence, and give them a sense of autonomy while they are doing it. Relating the task to their future goals has more impact on pupil motivation than compulsion or preparing for a test (Busch and Watson, 2019).

Create the right environment for learning

An environment that is conducive to learning is both demanding and supportive. Set high expectations and provide the support pupils need, which will be different for different pupils. Encourage pupils to see your critical feedback as confirmation of your belief in their ability to meet a challenge. Effort is contagious, so sit pupils according to who you want to influence whom, rather than let them choose where to sit (ibid.).

Review

Start each lesson with a brief (5-8 minute) review of the previous learning and do weekly and monthly reviews both of information and of skills (Rosenshine, 2012). Repetition of facts and ideas helps to interconnect them in mental structures or schemas and so to embed these in the long-term memory, freeing up the working memory for learning new material or problem-solving (Sweller, 1988). Similarly, thinking processes that are rehearsed become easier through repetition. Not all such practice is equivalent in its effects, however; the most impactful time to practise or review is when one has begun to forget, and the act of trying to remember itself aids learning (Deans for Impact, 2015).

Explain

Pupils understand new material by linking it to what they already know, so build upon pupils’ prior learning and experience. Use analogies to map new ideas onto familiar ones. Allow for the limited capacity of working memory by pacing the introduction of new information. Introduce new learning in steps, using models and ‘worked examples’ as demonstration (Rosenshine, 2012). Explain what it means to ‘master’ the material being taught. Learning is enhanced if you present ideas in two complementary ways, for instance through spoken explanation and matching illustration simultaneously, but not if the two ways are split (Deans for Impact, 2015).

Practise

Guide practice so that pupils rehearse new material.To enable them to store it in their long-term memory, give them time and opportunity to summarise, re-express, or elaborate on it. Provide scaffolds for difficult tasks and gradually remove them. Increasingly require and guide independent practice. Use retrieval practice that requires pupils to come up with answers. Encourage pupils to gauge their own learning accurately not by how familiar something feels but by self-testing or explaining it to other pupils. Use a variety of techniques, including whole-class and structured group work, guided learning and individual activity (Husbands and Pearce, 2012; Rosenshine, 2012).

Use a variety of questions to check for understanding frequently

The right kinds of questions both check and deepen pupils’ understanding by having them explain and rehearse material, and help them to develop higher order thinking and metacognition. Questions might include asking pupils to summarise what has been presented, asking them to express an opinion about it, asking them why this might be true in some instances but not in others, or asking them ‘What makes you think that?’ when they have expressed an idea (Husbands and Pearce, 2012).

Seek feedback

The key reason for seeking feedback on the pupils’ understanding is to help you plan the next step in your teaching (Wiliam, 2011). ‘When teachers seek, or are at least open to, feedback from students as to what students know, what they understand, where they make errors, where their misconceptions are, when they are not engaged, then teaching and learning can be synchronised and powerful’ (Hattie, 2008).

Give feedback

Quality matters more than quantity. Focus on correct rather than incorrect responses and make feedback low-stakes since stress makes pupils less open to receiving feedback. The most important thing about feedback is what pupils do with it (Wiliam, 2011). Effective feedback is focused on the task rather than the pupil, and on what and how they can do better rather than what they can already do (Deans for Impact, 2015).

Teach the transfer of knowledge

To transfer knowledge taught through specific examples to a different problem requires an understanding of that context and of the underlying structure of the problem. Present problems that appear unlike but have the same structure underneath. Have pupils recognise the structure of a problem by identifying the steps to solving it. Alternate concrete examples with abstract representations (Deans for Impact, 2015).

These generic principles are not prescriptive. They won’t necessarily work in all situations in all subjects, and it is important that a teacher trusts his or her professional judgment and expertise. Nor are they meant to homogenise teaching: it’s important that teachers are themselves and play to their own strengths and enthusiasms. They do not discount the importance of the relationship a teacher creates with pupils. What these principles offer are evidence-based ideas teachers can use to inform their practice, complement their expertise and expand their repertoire of teaching techniques.

The theme of this journal is openness. Adopting an open attitude towards the ways research can inform practice can benefit all teachers, experienced and less experienced alike.

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KEY INSIGHTS FROM STATE-INDEPENDENT SCHOOL PARTNERSHIPS IN INCREASING UNIVERSITY ACCESS AND PARTICIPATION

Tom Arbuthnott | *Director of Outreach and Partnership, Eton College*

Since 2000 we have seen a need, if not a demand, for school collaboration for a multitude of reasons (Lucas et al., 2017). For example, in 2019 our closest neighbour, Slough and Eton Business & Enterprise College, brought a failing secondary school into its Multi Academy Trust, allocating significant amounts of leadership and administrative time to its improvement. This has become standard practice in the maintained sector, supported by the network of Regional Schools Commissioners.

However, the direct impact of such collaborations are sparsely documented, although there are some indirect results discussed in research such as ‘positive influence of inter-school collaboration on teachers and teaching, with practitioners reporting an increased motivation to engage in professional dialogue with their colleagues, knowledge mobilisation and a general shift towards more learning-oriented and enquiry-based cultures in schools that have been collaborating’ (Stoll, 2015). As Armstrong (2015) suggests, the one thing we are sure of is that there is the appetite for these collaborations.

Even though only a decade ago there was some reluctance of independent school involvement in those partnership, with the misguided rhetoric of independent schools propping up the state sector as suggested by some, the level of debate and analysis in the independent sector has made very considerable strides since then. A successful example we are proud to lead is the cross-sector school collaboration involving Holyport College, the London Academy of Excellence and the Tony Little Centre. It is also now common practice that independent schools appoint Outreach Directors, often at senior management level: another proof that these collaborations are taken seriously. This also fulfils one of the conditions often cited as important for those collaborations to succeed: namely, robust structures and processes (Chapman et al., 2009).

Diligent readers of this journal may remember ‘All Together Now’ which came out last year, laying out a roadmap for schools to get involved in establishing outstanding collaborative music projects. This was a significant publication which had strong impact across the sector, with a number of schools launching new music projects in response to it. However, perhaps the most important outcome was in securing funding from the Independent Schools Council for additional projects of similar ilk, launched out of seminars held at the Tony Little Centre.

The Department for Education has acknowledged that independent schools alongside universities have a wealth of knowledge which could be utilised to open up access for pupils from disadvantaged backgrounds (DfE, 2018). It was, therefore, self-evident that our follow-up project should look at ways in which independent schools are supporting disadvantaged students in achieving places at the world’s most outstanding universities. We believe that such a project will have a strong impact on the lives on those pupils who need this support and will shift the narrative to one which advocates state-independent schools partnerships in widening access and participation. We held our first seminar on May 1 2019 in the Tony Little Centre, attended by 17 partnerships co-ordinators from a range of different schools, independent and state, single sex and co-ed, day and boarding. These were some of the examples and insights which shaped our discussions:

1. Lumina is an annual summer school run by Harrow School, which has grown from 40 students in 2014 to 200 students this year. They come from 40 schools, and the intervention organised by Lumina aims to make sure that pupils understand the process and targeting of an application to an elite university as well as students from independent schools do. 141 Lumina students, the vast majority of whom are highly disadvantaged, achieved places at Russell Group Universities last year. It costs £40,000 to run, the same cost as a single full fee bursary, and would be easily replicable in any other city or borough.
2. Kickstart Medicine is a targeted intervention run by Immanuel School in Hertfordshire. The driver of this programme, Liam Suter, had the advantage that he was taking over partnership work at a school that had no institutional history of collaboration, so he could start everything from scratch. He went back to first principles, deriving a Theory of Change about the most effective way in which his programme could support Medical School applications. This gave rise to a sustained programme involving over 120 hours of interventions. Over 20 students from the partnership have made it to medical degrees in the first year of operation, and each of these is tied to a rigorous analysis of that initial Theory of Change.
3. We established that the most effective interventions are proactive rather than reactive, derived from a plan, rooted in evidence and seek to make a systematic response to a problem, rather than from an ad hoc request to help an individual school or student. Independent schools have the opportunity to be evidence-driven in working out how to help; and the sharing of costed, assessed models such as the two above, that are easily scalable and replicable in different parts of the country, could lead to a step change in what independent schools are doing in this area.

4. What will make the most difference is if this can be done in concert with the outreach programmes being led by the most selective universities. Oxford alone spent over £14 million on outreach this year, and the sophistication of the analysis and intervention being made is increasing year on year. We need to offer our help to that effort. In some places, such as Colfe’s in South East London or Norwich School in Norfolk, independent schools are working with individual colleges to provide Oxbridge hubs, bringing students in from a whole region or borough to provide accessibility services. These models, again, are relatively easy to replicate.
5. Finally, it became clear to us during the seminar that the best interventions take place within the context of a school partnership that already covers other curriculum projects, and within which, therefore, significant trust has already been built up. Along with eight other local schools, Eton will be launching a new model called the Thames Valley Learning Partnership over the course of the next year which will provide just such a structure.

Over the coming months I will be co-writing a publication developing many of the ideas from the seminar and also showcasing some of the best case studies from across the sector. I am really pleased that Anushka Chakravarty, who leads university admissions at the London Academy of Excellence, will be co-writing this publication: Anushka

is determined that we will match up the experience and perspective of disadvantaged students with the projects being developed by independent schools. If you’d like to know more, or to receive the publication when produced, please contact t.arbuthnott@etoncollege.org.uk.

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ETON ASPIRATIONS PROJECT: WHY PEER TO PEER INTERACTIONS MATTER

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Oscar Bryan | Year 12, Eton College pupil

Crisp and Cruz (2009) have concluded that there is no single definition of peer mentoring as it spans contexts and purposes and is adopted by schools (and other organisations) with different outcomes in mind. Very often people associate peer mentoring with peer tutoring and view it as a platform to enhance academic achievement. Yomtov et al. (2015:2) give a useful working definition: ‘peer mentoring is a process where a mentor provides guidance, support, and practical advice to a mentee who is close in age and shares common characteristics or experiences’. This definition of peer mentoring which involves support beyond the strict limitations of the curriculum is what this article describes.

Peer mentoring can be an empowering process: it can help enhance social competence, build relationships of trust, contribute towards wellbeing, improve educational attainment, reduce negative body image perceptions (Thompson et al. 2012); enhance students’ school self-concept, school citizenship, sense of self and possibility, connectedness, and resourcefulness (Ellis, 2009); and reduce bullying (Coleman et al., 2017), among other benefits. Various national bodies have produced guidelines to formalise the process of peer mentoring and ensure that support is provided both to mentors and mentees (e.g. Northamptonshire Council, Kent Council, West Sussex Council). Here we want to propose a slightly different model, one which is driven and designed by pupils and their desire to ensure that some of the opportunities they were given are passed on to others.

Etonians in Year 12 usually undertake some form of community engagement. This might involve helping in local libraries, keeping clean the local community or doing some tuition with younger pupils from local state schools. Under such an initiative some of the boys did Maths mentoring. They soon realised that beyond the practice tests in Maths and the explanations of Maths problems there was a more important aspect of this project. It was the fact that the pupils across the two schools were benefitting far beyond that. It was a mutual enjoyment and empowerment felt through the mentoring process which made the boys launch the Eton Aspirations Project. The project invited pupils from Holyport College, one of our partner schools, to participate in the project. Term 1 looked into logic and maths problems which required lateral thinking, while term 2 looked into different topics in the social sciences and the arts. These included problems drawn from social psychology, how to set up a business, ethics and moral dilemmas and an introduction to playwriting. This was not a formal course, so pupils could choose when to come as this was on top of their lessons and other extracurricular commitments. We found that the pupils quickly became regulars. Beyond the academic challenge, the project offered them a place to meet friends while discussing interesting topics. This is the summary of what the Year 8 and 9 pupils identified as aspects which they appreciated about the project. There is a combination of elements which made the project successful: academic and social.

Eton boys gave their free time on Tuesday evenings to this. What was in it for them?

Vernon Li

The most important thing I’ve learnt from this experience has been a larger understanding of the way people think. [...] While our school has certainly become more diverse, I think that the ‘Eton Bubble’ still, to an extent, holds true.

Most if not all Etonians think very rationally and methodically; but Aspirations is interesting in that our intellectual conversations are being had with students of a different academic level, of differing backgrounds and studying separate syllabuses.

This has been helpful to me when teaching Mathematics or Logic, because of the need to look at problems and empathize with the way our Holyport students progress through thinking stages. In Humanities, it has not only made me more open-minded, but provided our mentors with the fun and sometimes frustrating task of playing devil’s advocate!

For the future, Aspirations has informed my ability to empathize with others and communicate my own vision to them, whether they be my peers, mentors or mentees; and it has helped teach me how to engage people and weld together different ideas in a group setting.

Oscar Bryan

I found what was most beneficial was a further understanding of the subjects I learn in school, by explaining them in depth to people who have often never encountered anything like them before.

By going through the basics of your subjects, you are not only revising these important foundations in a fun way, but simultaneously gain a true appreciation for your own understanding and knowledge of the subject; something which I find is often rare and hard to do in the Eton bubble. Beyond that, it is fulfilling to know that you are actively helping bright young kids participate in discussions and topics they may have otherwise not come across, and know that you are making a positive contribution to their education.

The Project ended in March 2019 when the Holyport pupils gave a short presentation about a topic they chose in front of staff and pupils from Holyport and Eton. We found that a ‘grassroots’ approach to peer mentoring can be a very successful model. The content, although academically interesting, is not the main driver for mentors and mentees to participate in such initiatives. It is mostly the wider experience which pupils enjoy, and this can be at the heart of such mentoring programmes.

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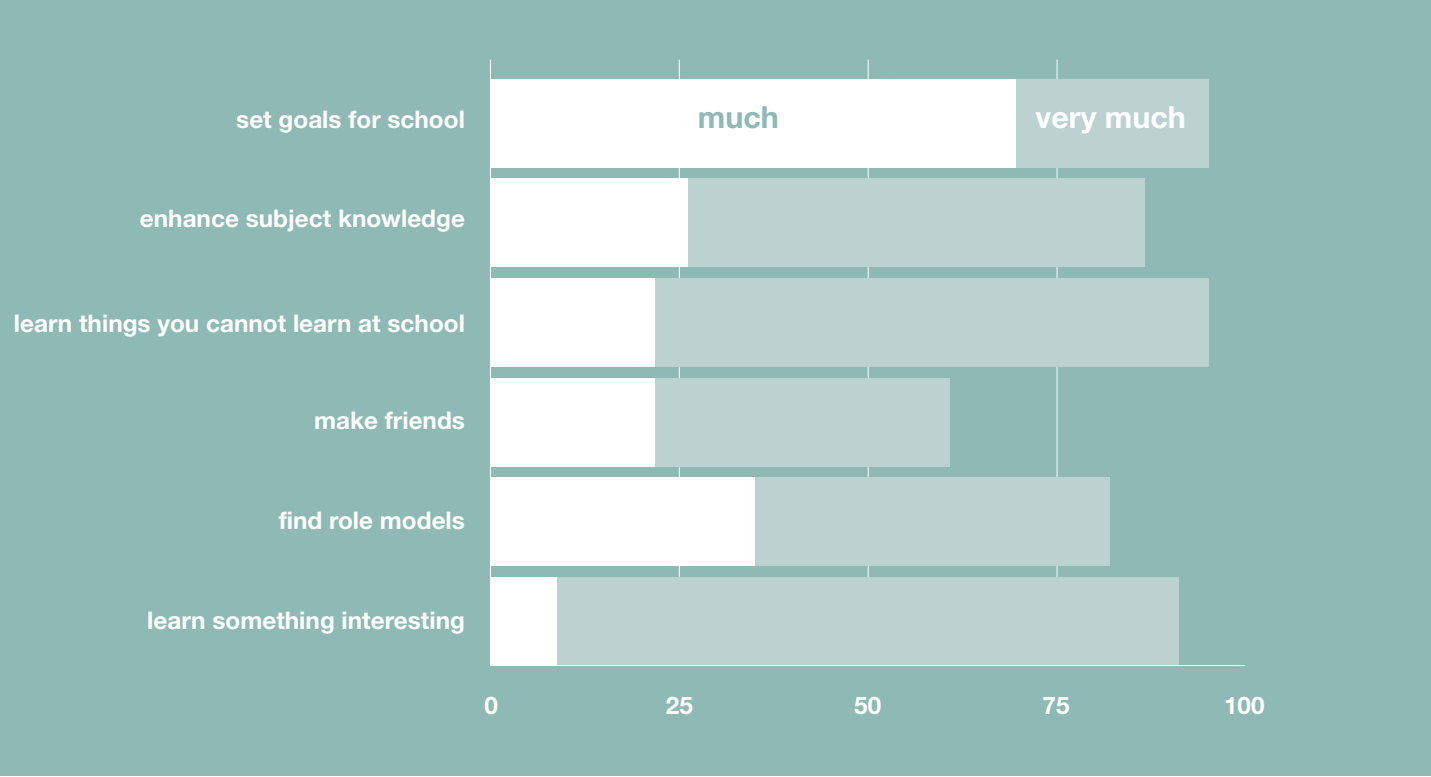
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DIVERSITY AND OPENNESS: TEACHING AND LEARNING

This section of the journal looks at teaching practices and draws from what practitioners have been trialing in their classrooms. Vaughan Clark introduces the idea of what students perceive as effective collaboration. Similar to Le (2016) who argued that we often do not ask students what obstacles they find in collaboration (she identified students' lack of collaborative skills, free-riding, competence status, and friendship), Vaughan discusses what students perceive as opportunities in collaborative work. David Hallwood approaches creativity in science with an open mind and suggests ways creativity can be embraced within the natural sciences. George Gundle looks at an interesting approach to ensure that pupils engage with the feedback they get on their homework. As Winston et al. (2016) suggests, when it comes to feedback on written work what is more important is not the feedback as such but how students engage with it. As Wilson (2012) points out, while feedback is a key element in learning we rarely check what students understand by it and how they act upon it. It is, therefore, crucial that feedback on assignments that students submit acquires the same dialogic approach which is often adopted in teaching. The Guru Method aims to achieve just that. Phil Macleod, on the other hand, approaches classroom participation in a way which encourages all pupils to own up to what they know and ensure everyone is actively engaging with what is happening in the classroom.

Jo Rainey describes her action research project, a reflective research process, with her Year 12 boys and how they approached interpreting historical narratives through multiple perspectives and voices. James Stanforth and Kate Cheal provide a blueprint for schools that try to incorporate more technology in the classroom, and for the structures that need to be put into place for this to happen successfully. The section continues with three pieces by our boy editors. Aakash Gupta discusses his research on iPads in the classroom, giving a balanced argument between the benefits and obstacles. Jonathan Yang asks the question whether setting by ability is something which schools need to reconsider, and maps boys' perceptions on the matter. Shaw Worth gives his own take on diversity and why it is important for all institutions in general, and Eton in particular. Finally, Kristen Hassler discusses openness and diversity in the context of learning difficulties. She describes how the learning support team at Eton College is removing the stigma around expressing the need to seek help.

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EFFECTIVE COLLABORATION: WHAT DO STUDENTS THINK?

Vaughan Clark | *History of Art teacher, Eton College*

Teachers strive to understand how to improve collaboration most effectively. As a teacher who actively encourages collaboration, and wanting to ensure this is done in a way which enhances teaching and learning, I decided to ask my pupils about examples when collaborative projects worked for them and they found them meaningful. These were some of their responses:

In translating Arabic: 'I achieved a more artistic interpretation... It was beneficial to hear different opinions which in turn spawned an artistic interpretation which was better than any one of us could have come up with... It was useful to have an environment where ideas could just be bounced around, built on and improved.'

In writing a Personal Investigation: 'talking through ideas with people in my set about the thesis of the paper was valuable... without doing this, the thesis of my paper would have been weaker.'

In sharing a traumatic experience in a boarding house: 'when a boy died in the year below me, the entire house spent time mourning for him. A lot of older boys didn't really know him, but spending time together meant that his friends felt that they weren't alone in being sad.'

In composing music: 'I worked with another boy: combining his ability to construct and layer melodies and my rhythmic knowledge and knowledge of technology, we created what I thought was a catchy song... I think collaboration also means learning to care about something when at first you don't care much for it.'

A problem that one cannot solve by oneself leads to the need for collaboration; effective collaboration comes from difficult questions. How often do teachers pose questions that only collaboration can solve? How often is collaboration structured into forms of assessment? How often do we design activities that lead to students amplifying each other's skills and knowledge, personalities and emotions, forms of communication and reflection, experiences of failure and achievement? How often do we create environments in which students are encouraged to 'lean in' to each other, and to be interesting to each other and interested in each other? How often do we see ourselves as collaborators in the students' efforts? How often do we ensure that the quality of feedback is such that it has to lead to a change to a student's work and that they have to try again or adapt what they have done? How often do we allow their thoughts, feelings and perceptions to change the way that we teach and think about our subject matter? Is it possible to have a curriculum that values so-called independent thinking and collaboration?

The occasions when I have worked with colleagues to reflect on and plan curriculum design count as my most memorable examples of collaboration at Eton. They have been some of my most satisfying experiences because I have learnt from others, adapted my thinking and beliefs, and had opportunities to share my ideas and get feedback.

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LEADS TO THE NEED FOR COLLABORATION; EFFECTIVE
COLLABORATION COMES FROM DIFFICULT QUESTIONS.*

CREATIVITY IN PHYSICS: MOVING BEYOND FACTS

Dr David Hallwood | *Physics teacher, Eton College*

Creativity is a quality that is often overlooked in Physics education. With a curriculum that focuses on knowledge and applying knowledge to a narrow set of problems, there is little incentive or time in the curriculum to incorporate creative tasks. It seems that often natural scientists do not credit creativity as the necessary means for some of the discoveries which have shaped our world today. As Ambaum (2008) suggests, it is the contradictions between theories we hold true and observations which happen in labs which need creativity for new knowledge to be produced. Those contradictions do not bring Physics, or other natural sciences, to a standstill, but engage those involved in creative discussions. Professor McLeish (2019) also argues that there is a lot of discussion on ‘scientific methods’ and how hypotheses and theories can be refined, but there is little discussion of what happens before then. The application and refinement of theoretical models rests on the essential ability to conceive of those ideas in the first place and relies on the creative core of science: ‘the imagining of what the unseen structures in the world might be like’ (ibid.).

This, I think, is a tragic waste of Physics education. If we go beyond knowledge, we discover physics is about discovery, which is a creative pursuit. If we change the narrative of how science works and encourage pupils to explore their own creative avenues, natural sciences can become subjects which hold no formulaic assumptions of how they work. Below is my own modest contribution to how I have been exploring creativity within Physics.

Asking good questions

It takes inquisitiveness to ask good questions to understand the world around us, but we often don’t encourage students to do this. If you give a student a piece of string with a ball on the end and tell them to swing it and measure the time period, they will do this with little thought and produce a good result. No creativity has been deployed and the student does not have to understand of the purpose of the experiment. Instead, if you ask the student, ‘What would you like to know about the string and ball?’ they will now create many different questions and become engaged with the problem you are studying.

Developing a test

In Physics a practical lesson often entails giving students instructions to follow. This could be to measure the time period of the pendulum for different lengths of string. However, students might often miss the purpose of what they are doing and this can lead to misconceptions. A different approach is to ask the student what they want to know about the time period of the pendulum. They will try different variables to see what has an effect. This engages their mind in understanding what will and will not affect the time period.

Developing a model

Explaining the results can be difficult and the solution is often simply given to students. Although slow, it is worth allowing students time to create their own explanations or model. They will develop a better understanding and be more likely to remember what they have learnt. This will then allow them to apply their model more effectively.

Applying the model

It may be tempting to now give students a list of situations where a pendulum may be useful. Instead, students should be allowed to come up with their own uses for a pendulum. The obvious one would be a measure of time, but their better understanding could lead them in a different direction, such as using the pendulum to measure the gravitational field strength.

The processes students go through can be done in isolation but if they are asked to work in groups they will not only come to solutions more quickly but they will also use more creative processes and will be encouraged to experiment with ideas and innovations, not only with predetermined theories. With a changing of narrative, there is great potential for Physics to become a creative subject which will in turn encourage more pupils to study it.

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THE GURU METHOD: ENGAGING PUPILS IN THE FEEDBACK PROCESS

George Gundle | *Physics teacher, Eton College*

On a typical piece of homework, pupils answer most questions correctly, make a few minor errors and get the wrong end of the stick once or twice. ‘Going through’ homework collectively, therefore, leaves a majority twiddling their thumbs until their specific query is addressed. Even worse, pupils might take a cursory glance at their mark (and the mark of the person next to them), stuff the work into their folder and never look at it again. The effort and time given to mark their work might result in no engagement by the pupils and, crucially, no progress based on that feedback. To improve this situation, I have devised what I have named ‘The Guru Method’. This involves the whole class in a collaborative session in which we aim to master a particular set of questions. This approach relies on the idea that at least one member of the group will have correctly answered each question. Moreover, the method is likely better suited to the sciences and maths where a ‘model solution’ can be more easily agreed upon; however, with certain adaptations the premise of this can be used in other disciplines.

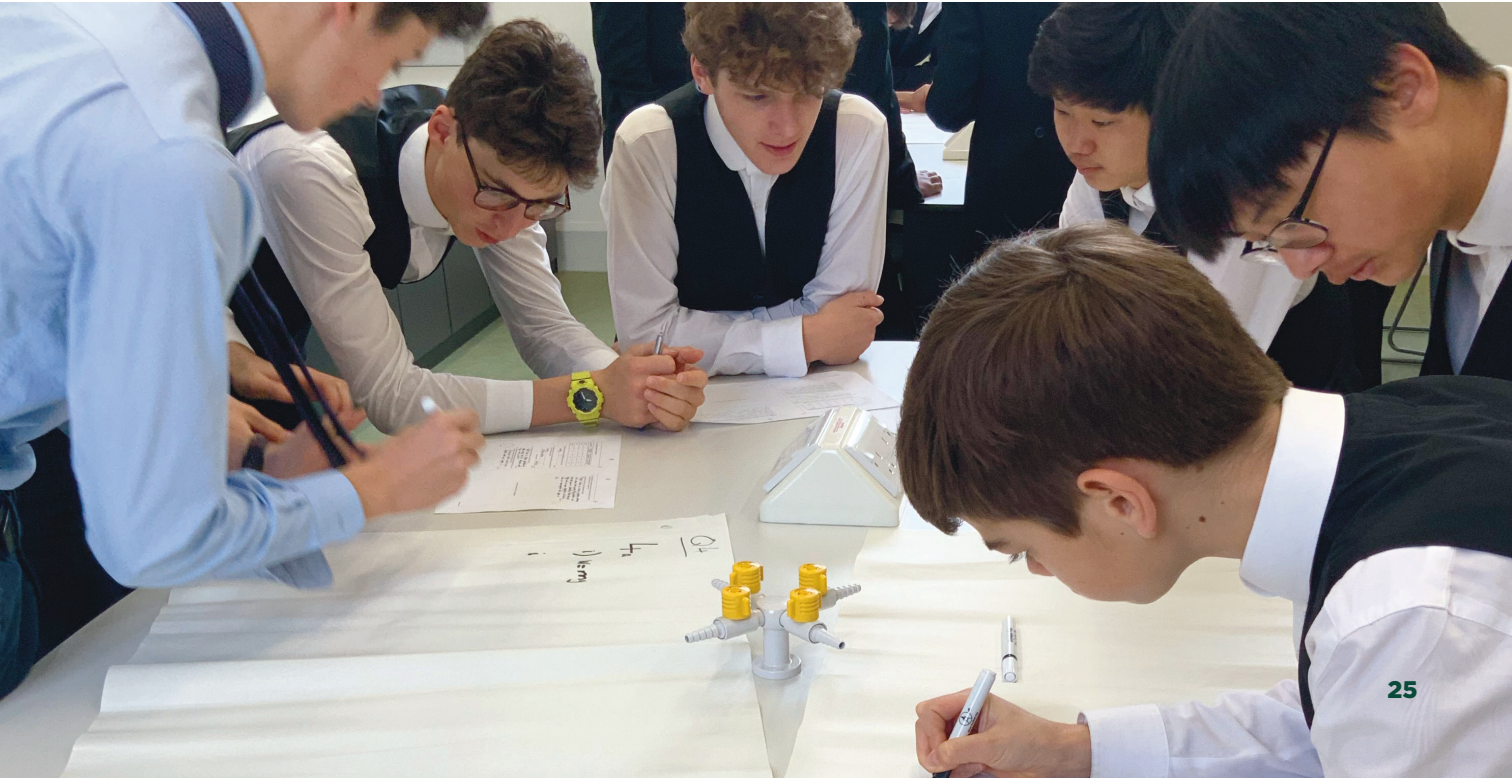
How does it work?

In a typical piece of homework for physics there will be five problems for pupils to solve. Once the pupils have completed the homework and it is time to get feedback, blank sheets of A1 are distributed around the room labelled Question 1-5, and marked work is returned. The instruction to the group goes along these lines: ‘If you think you have nailed Question 1, take yourself over to the Question 1 A1 sheet and present a neat, clear and concise model answer. You will become the Question 1 Guru. If you would like to discover why you have gone wrong on Question 1, you should consult the Guru’. The same applies to the remaining questions. Pupils now distribute themselves

around the room, either presenting their own work and explaining it to others; or trying to figure out where they went wrong and how to improve their answer with the help of the resident Guru. The role of the teacher here is to ensure that there is some circulation. The same pupil might present a model answer to Question 2 and then move on to discuss Question 4. After a twenty-minute session, pupils will have had the chance to correct their mistakes, improve the detail of their answers and explain some of their own work. ‘Go and consult the Guru,’ I might say to a line of keen pupils waiting to hear the answer straight from my lips rather than their peers. Again, more pupils are gainfully occupied for longer, leaving the teacher free to circulate and make sure the ‘model’ solutions going down on the big sheets really are just that!

Where next?

The question remains: are pupils taking the feedback process seriously? At present, the method relies on their innate conscientiousness while making the feedback process more active and engaging. Pupils genuinely enjoy becoming a resident expert, albeit on a section of a single homework. This, however, still means that they develop self-efficacy: they strengthen their belief in their ability to master something, even if not everything. An extension of the method might be to take in pupils’ work for a second time, after they have had the opportunity to consult the Gurus. They would receive a second mark and feedback reflecting how effectively they were able to make corrections in school. This approach would inevitably involve more work for the teacher but could encourage pupils to take ownership of their own work and add an incentive to address the mistakes they made on first attempt.



OWN UP QUESTIONING: CREATING ENGAGEMENT IN THE CLASSROOM.

Phil Macleod | Physical Education and Geography teacher, Eton College

Have you noticed this pattern? We ask a question and those who think they know the answer and can be bothered to raise their hand do so; these are often the same keen students time after time. We then choose one of these volunteers, more often than not choosing the student who we think will give the answer that we expect to hear. If it isn't, we often continue asking other keen and likely hand-raisers until the desired answer arrives. We then move on, consoling ourselves that everybody now understands.

How many of us have been guilty of not thinking critically about this flawed form of questioning? Have we ever thought how many and which students are involved in this process? We would like to think that everybody has been engaged: they have not (Watts and Sattes, 2011). The likelihood is that far fewer students have taken part in the moment than we would have liked and most have not been challenged, stretched or even been stirred from their smug slumber!

We have to rethink how we question. What is it exactly that we want to effect with questioning? Aims might include listening, mutual respect, engagement, decision making, checking and furthering understanding, igniting curiosity, and a celebration and appreciation of the knowledge of others. We might also aim for a mutual appreciation and acknowledgment that not everybody is at the same place in their understanding; furthermore, that this is a normal situation and not one to be ashamed of or embarrassed about. Perhaps we can create an environment in which the relative strengths and weaknesses of those around us are recognised, appreciated and even turned to everyone's advantage; an environment in which all involved feel that it is a safe space in which to make mistakes, to share their thoughts; a space that no one needs to fear; a space in which those around may be regarded as a resource and even a helping hand. As van Zee and Minstrell (2009) suggest, questioning can be a way to guide student thinking rather than check for understanding. It should, therefore, be a resource for teaching and learning (Chin and Osborne, 2008).

What if we turn the age old 'question and answer' model on its head? If we start by saying: 'Raise your hand high if you don't think you can contribute anything or share a thought on subject X.' This is something I have been experimenting with in my classroom and here I want to share a blueprint of how this might work in different contexts. The following scenes may play out in your classroom after you have given this instruction.

Scenario one (rare): no one raises their hand to admit they don't feel that they can contribute. Now you have been given license to ask anyone in the room. Go ahead and choose a student to select a peer to say something they understand about X. Following the 'volunteered' student's contribution you can then ask those who feel they cannot add to what has been said to raise their hand high. The 'volunteered' student is then given the opportunity to choose someone who has not raised their hand - in other words, a student who thinks that they can add a contribution. One of these will now be selected by the 'volunteer', a task often performed with relish! The newly selected student will then add their contribution to that of the 'volunteer'.

The aim is to build on what has already been offered. In this way a class understanding emerges. You now continue the 'own up answering' in the now familiar form by asking if there is anyone who cannot build on what has been said thus far to raise their hand. This process of 'own up answering' can continue for as long as the class understanding is building. Eventually you may well find that the habitually reticent but knowledgeable student is tempted to place the metaphorical cherry on the top of the class understanding of subject X.

Scenario two (common): one or more students raise their hand to admit they don't feel that they can contribute. After publicly recognising the courage of those who have raised their hand the teacher now invites one of them to choose a student who has not done so. Hereafter the teacher and students follow the same pattern of 'own up answering' as in scenario one.

While the 'own up answering' process unfolds, students can be encouraged to write their own notes to improve their work and understanding of topic X. Arguably more effective is the teacher writing notes on the class offerings that all can see. For many this will validate and for some even celebrate the thoughts, ideas and knowledge of their contemporaries.

I have also been using a list with items which I believe are enhanced through the 'owning up' questioning process. I keep track of them and I have noticed clear advancements in my lessons. These are:

- Listening
- Mutual respect
- Engagement
- Decision-making
- Checking and furthering understanding
- Igniting curiosity
- Celebration and appreciation of the knowledge/ideas of others
- Creating a secure environment in which all feel one that it is a safe space in which to make mistakes and be supported
- Creating a space in which those around you may be regarded as a resource.

I aim to develop the 'own up' questioning further and use it with students as much as I can. They seem to enjoy the process. Importantly, it contributes to an environment where pupils feel safe to express their thoughts.

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QUESTIONING CAN BE A WAY TO GUIDE STUDENT THINKING RATHER THAN CHECK FOR UNDERSTANDING. IT SHOULD, THEREFORE, BE A RESOURCE FOR TEACHING AND LEARNING.

COMPLICATING THE NARRATIVE OF MAO’S CHINA: INVESTIGATING CONFLICTING HISTORICAL ACCOUNTS WITH YEAR 13 BOYS

Joanna Rainey | History teacher, Eton College

I embarked upon this action research project in the Michaelmas term of 2018 as a response to a problem I had observed in my classroom for a number of years: boys encountered complicated historical stories on a daily basis but were rarely willing or equipped to grapple with why and how these stories were complicated.

The project revealed that complexity, whilst adding much needed tone to a black and white interpretation, can also cloud boys’ ‘views’ of a period. Although their ability to identify and explain where and why a ‘single story’ was developed and the ability to complicate this using their own knowledge was greatly improved, it became clear that this needed to be part of a bigger re-think about how to approach teaching history.

Stories are problematic in the history classroom. Whilst they have the innate power to enthrall and enlighten, they also oversimplify, often provide a single lens or viewpoint, and most dangerous of all, allow power to rest with the storyteller rather than the story’s subject. As Kellner (1989) asserts, ‘the straightness of any story is a rhetoric invention’ (p. x), and historians are liable to develop ‘selective, ordering, re-contextualising strategies’ (Parkes, 2009, p.124) to make sense of, and give meaning, to the past. Creating a story of the past makes it recognisable, providing order and intrigue, but for boys whose skills of historical reasoning (van Boxtel & van Drie, 2013) are still evolving, the ability to discern that stories are interpretations of the past, rather than the unfiltered past, is a lesson which must be taught explicitly.

Challenging their conception of historical truth and the perceived objectivity of some stories was a necessary first step, as Megill (2017) suggests ‘we must acknowledge narratives are images of the world rather than objective reflections of it’ (p. 64). Then within the context of Mao’s China, understanding why the multiplicity of ‘stories’ that are now available had been previously absent and why the official story has been, mostly, heavily censored and purposefully constructed, was essential before contrasting it to oppositional stories that are being discovered by garbologists and sinologists. Making sense of these stories, and using them to create their own, was the final step. It was fundamental to challenge preconceptions and pre-existing stories by actively engaging with complex history. Indeed, embracing complexity and multivoicedness (heteroglossia) was a challenge worth pursuing, and one which using the methodology of action research offered all stakeholders (Stringer, 2014, p. 15), myself and the boys included, the chance to evaluate how well we responded to that challenge.

Data Collection

This action research project included a wide range of sources to provide data for collection and analysis. Data collection was divided into three distinct steps, mirroring the intended conceptual development of the boys and driven by the overall enquiry question. This ensured credibility through a polyangulation mixed methods approach (Mertler, 2017).

Step 1. Linguistic analysis of the initial ‘story’ of China, focus on use of domain-specific vocabulary, complexity and multiplicity of interpretations, and teacher observation and voice recording of boys’ highlighting and annotation of historians examples.

Step 2. Audio recording and teacher observations of classroom conversations, using van Boxtel et al’s (2016) ‘characterisation of student talk’ table to analyse focus and depth of understanding in independent presentations.

Step 3. Linguistic analysis of final story and closing interviews.

Reflections

Rüsen (1993) argued ‘historical learning cannot just be a process of acquiring history as ‘objective’ facts; it must also involve historical knowledge beginning to play a role in the mental household of a subject’ (p. 87). Exploring the process of learning history with the boys, and discussing their experience of it, demonstrated just how correct Rüsen was. Their initial stories of Mao’s China explored a one-dimensional interpretation, accompanied by absolute vocabulary choices and were shaded with a determination to name or characterise the period as a recognisable entity.

It became increasingly clear, through explicitly discussing the issues professional historians face and through asking the boys to express their concerns and doubts about their learning, that living with open-endedness and modality rather than absolutes was uncomfortable for them. As the project progressed, however, all eight of the participants engaged directly with this discomfort, and the final stories they produced demonstrated measurably improved levels of historical literacy (Chapman, 2011).

The success of this project, and the many questions it has raised for future consideration, have already had an impact on my practice. My Year 11 class have investigated the issues of ownership of the Arab-Israeli conflict narrative, and my Year 9 class researched an example of destruction and the story that was created around it. Each of these activities was approached by openly discussing the complexity of understanding how and why stories are created and sustained in history, and encouraging boys to embrace the discomfort of a clouded conclusion.



In preparing boys for a world where facts are easily manipulated and claims of ‘objectivity’ are dubiously omnipresent, this project has been vital in teaching me the need to challenge the ease with which boys tend to accept stories at face value. Whilst the eight Year 13 boys who participated walked away with a complicated story, they walked away richer in their historical understanding.

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LAYING THE FOUNDATIONS OF ONE-TO-ONE TABLET USE IN THE CLASSROOM

James Stanforth | Head of Digital Education, Eton College & Kate Cheal | Academic Technologist, Eton College

Technology, in some shape or form, has been an established tool for teaching and learning in many schools for a long time, but in the last few years digital education has taken a significant step forward. We have reached a watershed moment in the maturity of portable devices and wireless infrastructure; technology is now reliable, fast and easier to use than ever before. The ubiquity of mobile devices and internet connectivity is driving real change in the way people learn, work, communicate and live their lives. What is even more important, however, is that technology is now well placed to enhance teaching and learning and create learning environments which promote analytical skills, emotional intelligence, teamwork, adaptability, creative thinking, problem-solving, and global citizenship. Whilst these kinds of skills need not involve any use of technology per se, evidence emerging shows that technology enables higher level skills. For example, Crompton et al. (2019) found that pupils using mobile devices for cognitive processing were utilising all six levels of Bloom's Taxonomy. Forty percent of the activities had pupils working at levels one and two, remembering and understanding, and 60% were at levels three to six, applying, analyzing, evaluating and creating. Therefore, grounding technology within what is needed for learning is where the journey for successful integration of technology should start (Davies cited in Luckin, 2018).

In recent years, some departments at Eton have been exploring the pedagogical opportunities offered by pupils each having a tablet device. Traditional note-taking began to be replaced with digital notebooks comprising handwritten notes using a digital stylus, sketches, images and video content. Pupils' ability to quickly combine online research with their own class notes showed evidence of deeper learning as well as greater engagement. Teachers reported the benefits of being able to see pupils' work at any time as well as add written and audio comments, leading to a higher quality feedback cycle overall. This preliminary use of devices showed that there is scope for technological devices to be used in the classroom in a way which can encourage real independence and autonomy in learning as well as collaboration and creativity.

Increasing numbers of teachers have also been experimenting with digital tools to create online learning content. Flipped learning has allowed some departments to free up class time for deepening pupils' understanding through discussion, experimentation, and other extension activities, as video explanations and knowledge acquisition are provided as homework activities. Informal quizzing tools have also seen widespread use across many subjects allowing for quick, formative testing in class and interactive revision content for pupils' private study.

As a result of the increasing use of digital tools, in 2019 the school began a phased introduction of iPads as the 1:1 device for teaching and learning. This decision was informed by trials of devices in some departments, as well as research and consultation with staff, pupils, and visits to other schools.

Structures in place

On a strategic level, it has been vital to adopt a schoolwide approach and have buy-in from all key stakeholder groups. Yuen, Law, and Wong (2003) see the school leaders' vision, including understanding the impact of technology use in the curriculum, cultural background and the school's overall vision as important. Thus, school leaders' practices strongly impact the uptake and use of digital technologies in schools. Here, the leadership team recognised the importance of technology and placed it within the strategic vision for teaching and learning. Detailed planning and clear communication of the core justifications for the iPad programme have been critical to its success thus far.

The Tony Little Centre has been important as a hub to bring together various groups investigating forms of educational technology and measuring their impact. Pupils have played a joint role in researching and exploring the benefits of tablets in their learning with a preliminary study analysed by a pupil in Year 12, as discussed in the next article. We have also ran focus groups with pupils exploring their perceptions of educational technology and have conducted observations of lessons where iPads are used extensively. Dr Kevin Burden, an expert on the impact of digital technology on learning who has also written for this issue, is collaborating with the Centre to run a bigger scale research project on the impact of 1:1 devices.

The introduction of tablet devices to teaching and learning practices cannot happen without a high level of support for teachers. A pivotal decision was the appointment of an Academic Technologist to work with teachers on best practice. Over the course of the 2018-19 academic year and beyond, the Academic Technologist will provide training that is personalised, relevant and delivered according to teachers' individual needs and time constraints. For example, this can take the form of departmental training on specific learning priorities (perhaps differentiation or feedback) tailored to that subject's requirements, or regular one-to-one training sessions with a teacher to enable development of a range of digital skills. A key aim is to promote a culture of sharing amongst colleagues and within departments in the hope that experimentation will start to inform classroom practice and future planning as some of the possibilities offered by tablet devices become apparent.

Throughout this process, the technology should not take centre stage but should be available and should work instantly as and when it is appropriate. The best use of technology is when it makes the previously impossible possible, or when learning is deepened, extended or enhanced. It should also make it easier to bring the outside world into the classroom. In addition, it can be used as a tool to facilitate collaboration, project work or creativity. In every case, careful thought must be given to the role the technology plays in learning.

Technology for teaching and learning

The use of iPads should facilitate diverse learning activities, including note-taking, resource sharing, quizzing, and collaborative and creative tasks. The classroom management tools (Apple Classroom) enable teachers to monitor pupils' progress as well as lock their focus on a particular task. We notice iPads being used increasingly for pupil-led research, for note-taking, for accessing online resources and for informal testing.

Some lessons might make more extensive use of the iPad, requiring pupils to create digital work, collaborate with one another, or make use of video or augmented reality. Over time, we expect to see iPads being used in many novel and innovative ways, but as a starting point we anticipate the devices will be used for: online research; digital textbooks; annotating documents; rich note-taking supplemented with photos/videos/diagrams/links; creative & collaborative work; online assessment and feedback; quizzing and digital flashcards; showcasing and deconstructing pupils' work on the schoolroom whiteboard.

The integration of standardised iPads allows for us to explore more effective and efficient approaches to workflow, both in terms of the work that pupils complete as well as the work we do in our roles within departments or in other areas of the school. The use of apps like OneNote Class Notebook, for example, mean that a teacher can see a pupil's work at any time and offers different ways of marking and delivering feedback.

Today's learners access, receive and create content in a variety of formats and, using their iPad, they are able to move efficiently between these differing media. It may be, for example, that during the course of a lesson a teacher shares PDF documents to be annotated, or offers supporting video resources and links to useful web pages. They may then wish pupils to demonstrate their understanding by completing an online quiz before moving on to draft an essay, either in a more traditional pen and paper mode or using OneNote and writing with their Apple Pencil so that their work can be easily reviewed by the teacher and good practice can be shown on the board to the class.

This blending of new, digital learning possibilities with tried and tested educational methods was a key factor in the choice of device. Technology such as the iPad can now provide intuitive and reliable ways of enhancing the learning experiences of pupils and, at the same time, complement pedagogical methods which have been proven to work over decades or even centuries. Given the increasing role that technology plays in society and the implications of this for our pupils' lives beyond school, it is clear that a comprehensive strategy for the integration of digital tools in teaching and learning, informed by research evidence and with on-demand training and support at its core, should ensure that our educational provision remains engaging, relevant, and future-proof.

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THROUGHOUT THIS PROCESS, THE TECHNOLOGY SHOULD NOT TAKE CENTRE STAGE BUT SHOULD BE AVAILABLE AND SHOULD WORK INSTANTLY AS AND WHEN IT IS APPROPRIATE.

MAPPING PUPILS’ PERCEPTIONS ON IPAD USE IN THE CLASSROOM: AN EARLY ANALYSIS OF FINDINGS

Aakash Gupta | Year 12 pupil, Eton College

At the beginning of the Summer term, all Year 9 boys were given school-issued iPads with Apple Pencils to complement similar devices that all teachers had been given at the start of 2019. The reason I chose this topic was because there has been an increase in how much technology is used in the classroom and for this to be successful it needs to be done in a way which ensures that all boys are ‘buying into’ this new policy. The school should be commended for taking such a forward-looking step and implementing a unified technological approach for teaching and learning across the school. From a boy’s perspective there needs to be a streamlined approach to how technology is utilised at the school and steps taken to ensure that boys learn how to use technology in a way that is beneficial to them.

During this early phase, the whole year was surveyed to see how they were using their devices during lesson time. Out of the year of 259 boys, there were 156 responses, a rate of 60%. The first part of the survey was quantitative, with boys asked to rate how often they were using technology in the classroom from a scale of 1 to 10, where 1 was ‘Never’ and 10 was ‘Always’. Boys said that their main use of technology in the classroom was to access Microsoft apps such as Word and Excel, with 69% of boys saying they did this often (that is, rating it as an 8, 9 or 10). This was followed closely by taking notes, with 67% of boys saying they did this often. This close result is unsurprising as the iPads’ app stores are locked, and so the only note taking apps available are the native Notes app and OneNote, which is what teachers typically use. Over 50% of boys also used their devices often for accessing material online or through the school’s internal system, Firefly, and 47% said that they often used their iPads to capture lesson information, such as taking photos of the board. Only 10% reported that they often used their iPads to give feedback to each other, which suggests that the fundamental set up of lessons has not changed much; rather, the medium through which boys are now studying seems to have been altered by the introduction of technology.

In the second qualitative portion, boys were asked to provide positive and negative examples of their experience with iPads. There was a variety of examples provided, but the most-cited positive one was that iPads made organising notes much easier. Some boys also liked that they needed to carry fewer books to lessons as all the resources were available through devices, increasing efficiency both for the teachers and pupils. Boys also said it was easier to share information with peers and teachers, making it easier to collaborate on projects and hand in homework.

Boys had more varied responses when asked for negative examples, the most popular one being that it causes distractions, especially in lessons. This is somewhat mitigated by the fact that teachers can see what boys are doing on their iPads when they are in close proximity (i.e. in a lesson together) but enforcing this does waste valuable time. Many also noted that there were often problems with technology, including a potential lack of proficiency, which the school is working hard to change with a daily one-on-one IT Helpdesk available for boys and teachers, as well as specific slots set aside for teacher training with iPads. Some boys also said that it made other boys less sociable, or that it was harder to revise from digital notes compared to paper, even if they were more clearly organised.

Overall, boys seem enthusiastic about the adoption of iPads, with the note-taking capacities being repeatedly highlighted. There is definitely more that can be done with such powerful devices, especially when combined with an Apple Pencil, and boys seem willing to use their tablets in new and innovative ways during their time in the classroom.

RECONSIDERING SETTING BY ABILITY: PUPIL VOICE IN TEACHING AND LEARNING

Jonathan Yang | Year 12 pupil, Eton College

Background

Setting is the act of ‘teaching students with similar levels of current attainment in groups’ (EEF, 2018). Theoretically, it might be suggested that the introduction of a promotion/demotion system, with better performance rewarded by being moved to a more elite set, might motivate students to excel, due either to the desire to move up or not be moved down. Additionally, it helps all ability groups by tailoring lesson content to their ability.

The revision of setting policies has attracted much attention in education because academics have increasingly started to explore the disadvantages of segregating students, especially those of a young age, into groups based on their ability. A study conducted by UCL in September 2017 claimed that setting is ‘detrimental to the learning of mid-range and low-attaining learners’; however, it observes that the effects of setting differ based on a school’s context. Hence it might be worth thinking about how setting affects Etonians specifically, and seeing how they perceive setting.

The data used in this study came from a sample of 40 Etonians in Year 12, all of them in Economics where classes are of mostly mixed ability. The data was collected via an anonymous survey which went out to a convenient sample of boys. The study has its limitations in that it is a self-reporting study and does not look at many variables which might affect boys’ performance in a set. However, here we are only looking to address how boys perceive their ability vis-a-vis others in their group and what impact they perceive setting to have on their performance. These are some of the main themes which emerged from the data.

The difference between setting or not is marginal for those in Year 12

Out of the boys doing Economics, 47.5% of the boys did not even notice that their classes were chosen on different criteria compared to the rest of the school, possibly indicating that the change in learning environment from a set

class to a non-set class is marginal. When asked about setting in general, the vast majority of answers mentioned that not setting would result in a much wider skill gap; however, when asked about skill-similarity in their own class on a scale from 1-5, with 5 being very similar, 80% of answers chose a 3 or above, suggesting that even though Economics classes aren’t chosen on ability, the students still perceive them to be of more or less of equal ability. Of course, we cannot draw any final conclusions from this perception but it is interesting to see that even though boys say that the ability will be very mixed if there is no setting, when it comes to their actual classrooms they do not seem to notice much difference.

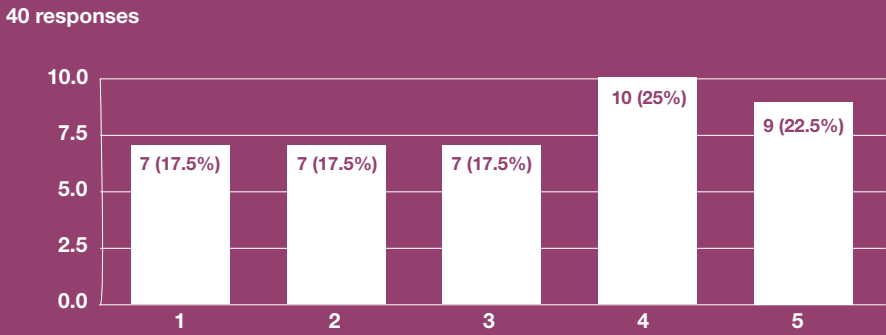
The possibility of being moved to a higher division is not a priority for boys. There was almost a 50% split whether boys would like to have the opportunity to move to a higher set. They mentioned other factors which were more important to them, such as having a teacher who motivates them or being in a classroom environment they enjoyed. The latter might be because of how teenagers work: they tend to get motivated by their peers more than by anyone else. Changing divisions is not what they would like to do, even if it meant being put in a higher set. This might justify a statement such as this made by one boy: ‘I am very happy in my current division and I feel like changing my current environment would be a setback for my performance.’ We cannot assume that such a change would have a negative impact on their performance but it would certainly affect their social relationships, which is of major importance to them.

Perceptions are mixed when it comes to what affects performance and how sets should be arranged

There was a real mix when it came to what boys think affects their work ethic in the particular set they were in. This is the breakdown of how their perceptions varied.

FROM A BOY’S PERSPECTIVE THERE NEEDS TO BE A STREAMLINED APPROACH TO HOW TECHNOLOGY IS UTILISED AT THE SCHOOL AND STEPS TAKEN TO ENSURE THAT BOYS LEARN HOW TO USE TECHNOLOGY IN A WAY THAT IS BENEFICIAL TO THEM.

Does the set you are in impact on your work ethic?





THE REVISION OF SETTING POLICIES HAS ATTRACTED MUCH ATTENTION IN EDUCATION BECAUSE ACADEMICS HAVE INCREASINGLY STARTED TO EXPLORE THE DISADVANTAGES OF SEGREGATING STUDENTS.

Even though the boys were not in a consensus as to what affects their performance in a particular set, when they gave qualitative responses they seemed to suggest that a mixed ability set would still encourage them to work hard since they can always look up to others: ‘my set already has clever people that already motivate me’ wrote one. There were boys who seemed to think that the subject is what matters, not the set: ‘I do not care about what set I am in, as long as I’m learning what I need to and improving my skills at the subject which should be happening regardless.’ Or: ‘My effort level does not depend on what a number next to my schedule says’. Another boy said: ‘Any grade I get I know reflects how hard I have worked irrespective of whether I’m going to move up a set or not’. Again, the comparison between peers is a strong element, since some boys said that they get competitive and want to prove to others that they can become better. However, there was the perception that the set is not what mostly affects that. In terms of how sets should be measured, summative assessments were not considered the best way to gauge ability. 67.5% of the boys said that they disagree with this being the norm in how schools arrange the sets. They gave other factors such as homework, participation in the classroom, and the teacher giving their own idea of the student’s level.

Conclusion

The study was limited by the fact it only used samples from a very specific cohort. Only boys in Year 12 were questioned and only in one department. Consequently, the survey did not give a holistic summary of the effects of setting in Eton. It was also a study which looked at pupil voice and self-reporting perceptions rather than into correlations between sets and examination results. Hence it might be worth questioning younger boys, as well as look at other factors which affect boys’ perceptions. As the participants in the study mentioned, there are many other factors which affect their perceptions of how their sets work or what might affect their motivation. Until then, a radical school-wide change in how sets work would be ill-advised.

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EXPLORING DIVERSITY WITHIN ETON

Shaw Worth | Year 12 pupil, Eton College

Before advocating for diversity, we must first understand it. For the purposes of this study, ‘diversity’ includes the real or perceived differences among people with regard to race, religion, physical or mental ability, sexuality, and family status — and their relevance and impact on the treatments, opportunities, and outcomes of the individual within society. Within an educational context, we must understand diversity to be manifest primarily in the makeup of the student and staff body, whilst according to the definition by UNESCO this is how inclusive education can be manifested:

Schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalised areas or groups (UNESCO, 1994).

Intrinsic in an assessment of inclusion is that all children are educated with a view to their capability for participation in wider society. This in turn requires that educational institutions be prepared for difference in their student body, and that celebration of such diversity is paramount in framing it as an enriching opportunity for learning. School communities present the most effective way of combating discrimination through the creation of welcoming communities, the construction of an inclusive society and ultimately provision of a high-quality education for all. Schools which do their utmost for all their children, including children with specific needs, have a strong value structure based on a commitment to valuing all students as being members of their school community. These values should therefore be reflected in all practical measures taken by the school to ensure that all the students experience success while accessing the curriculum.

INTRINSIC IN AN ASSESSMENT OF INCLUSION IS THAT ALL CHILDREN ARE EDUCATED WITH A VIEW TO THEIR CAPABILITY FOR PARTICIPATION IN WIDER SOCIETY.

Potentially, the implementation of the above measures and levels of success may indicate that schools need to review their rationale. Broadening the way in which success is interpreted and avoiding the measuring of success solely with examination scores is one way to start. Black-Hawkins et al. (2016) recount that throughout the years much has been said about inclusion; however, they emphasise that inclusion is not just a word, or just an idea. It needs to be a way of life, something that exists subconsciously as an underscoring philosophy.

In the UK, the recent shift towards diversity has been catalysed by the ratification of the Equality Act 2010, which was passed with the purpose of regulating, updating and consolidating the UK’s anti-discrimination policy. For schools, it has replaced nine previous pieces of legislation. There is no requirement for schools to publish a set number of equality objectives; the approach is instead proportionate, with larger schools likely to have more objectives than smaller ones. However, given the wide range of equality issues in schools, they have often published more than one objective. Department for Education advice for school leaders and governing bodies states that a school ‘should set as many objectives as it believes are appropriate to its size and circumstances; the objectives should fit the school’s needs and be achievable’. It is up to schools themselves to decide on the format they will adopt for publishing equality information and objectives. For most, this has been a set of equality objectives on their website.

Pragmatists have advocated for the promulgation of diversity within student bodies for more or less mercenary reasons (Cross, 2004); the prolonged perception of otherness, if conditioned at school, will inevitably positively impact students emerging into a necessarily diverse workplace and society. However, there are compelling moral and social reasons for diversity in education. It cannot simply be on the axis of a ‘business case’ that practitioners and advocates of diversity must operate. Sole financial and/or legal justification inadvertently grants those wary of such initiatives ‘permission’ to behave as if morally absent from a sense of shared responsibility. With this in mind, the Etonian diversity policies are striving to involve the entire student body in discourse and practice around the adoption of diversity initiatives. To a certain extent, the nationally required PSHE syllabus (implemented by Eton through the first three years in tutorials) attempts the same through the lens of ‘fundamental British values’, defined by Ofsted as democracy, rule of law, individual liberty, and mutual respect/ tolerance. The same values fit well within the scope of efforts to promote diversity.

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It is perhaps an overstatement to suggest that Eton has achieved great levels of diversity. The Etonian social nexus still somewhat restricts diversity. Not only is the school single-sex, its fees exclude a notable segment of the population based on income. The school still acts as a misnomer for privilege. However, the school has actively been putting into place initiatives in recent years which have successfully supported students who would have otherwise been unable to come. It is of paramount importance to clarify that the relative level of the school's diversity in its body does not necessarily impact its ability to provide a diverse education — but the stage on which Etonian inclusion initiatives take place is singular. There is still a bubble within which boys operate, primarily fostered by the boarding environment of the school.

At Eton, diversity policies, namely the boy-led 'social justice' societies (the Feminist Society and the LGBTQ+ Equality Society) have started to become more prominent but still need to be put centre stage. Compulsory exposure to proponents of such movements does take place (Laura Bates has spoken to various year groups on her Everyday Sexism project, for example), but it might be observed that lectures and seminars also leave student engagement with inclusive ideas as optional. Nonetheless, Eton cannot be indicted for a lack of effort. But diversity and inclusion has to be manifested across all levels of staff and students, and conversations around inclusion and diversity must be fostered; they should become the norm. It is not best to think of 'PC culture' as a set of edicts by which to abide; rather, it represents (nebulously) an active process of arbitration as we develop a unilateral societal consciousness of the injustices of the past and future. With these aims in mind there surely can be no question of the validity of an inclusive education's place at the school.

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WHY IS LEARNING SUPPORT NEEDED AT ETON COLLEGE?

Kristen Hassler | *Head of Learning Support, Eton College*

This is a question that is made repeatedly about the pupils that attend Eton College. There is perhaps an assumption that at a school where the exam results are consistently good, learning support is not needed.

Learning Difficulties or Special Educational Needs and Disabilities are not exclusive to those with cognitive difficulties. Learning Difficulties can and do affect a wide range of people. They have always been around. As a country, the UK is now much better at identifying and supporting those with a range of needs and this is why students with learning difficulties are able to access academically selective schools and universities more now than ever before. This is also why the Learning Support Department at Eton College continues to grow, both in terms of the number of pupils they support and the range of programmes and areas they support pupils in. The barriers to fully accessing the curriculum are being broken down constantly and the stigma associated with the Learning Support Centre is being challenged and diminished, slowly but consistently. The range of pupils and needs that we see are broad. The one thing that every pupil here has in common is that they know they can do better, and want to do so. All would be considered 'Twice Exceptional':

Twice exceptional individuals demonstrate exceptional levels of capacity, competence, commitment, or creativity in one of more domains coupled with one or more learning difficulties... Their exceptional potentialities may dominate, hiding their disability; their disability may dominate, hiding their exceptional potentialities; each may mask the other so that neither is recognised or addressed (Kaufman, 2018).

The Learning Support Department has been a recognised provision at Eton College since the early 1990s. The aim of the department, then and today, is to provide appropriate provision to pupils that cognitively have the ability to access education but need adjustments to support them in reaching their full potential; and to ensure that all pupils, no matter their learning difficulty or special educational need, have equal opportunities and access during their time here at Eton. Increasingly, parents are notifying the College of incoming pupils' needs so that appropriate support is organised and in place upon arrival. This is one of the most supportive steps that parents are doing for their sons with additional needs, as it means they join the College feeling more supported and successful. In the Learning Support Department we are seeing the pupils' confidence and acceptance of Learning Support growing year by year, and this does not stop at Eton: the number of pupils from within our department that go on to Oxbridge, Ivy League and Russell Group Universities continues to increase.

At present, about 8% of pupils at Eton have some form of input from the Learning Support Department. They come from all boarding houses and year groups. Some have academic scholarships. Whether a pupil has dyslexia or dyspraxia, executive functioning difficulties, autism, speech and language needs, visual or hearing impairment or physical disabilities (to name a few), we have experienced staff and support programmes available. We offer a range of provisions such as one-to-one lessons, small groups addressing areas such as executive functioning skills, and various assessments. We support their teachers by providing recommendations that can be implemented in the classroom. Pupils can be referred by their House Masters or make a self-referral (which is increasingly common).

One of the first areas that is covered is 'self-advocacy', based on our belief that no matter what a pupil's needs are if they are able to advocate for themselves they will go far. As Judy Galbraith outlines in her article 'Twice Exceptionality and Social-Emotional Development: One Label, Many Facets', 'Students benefit enormously when they learn how to be assertive and can respectfully and reasonably communicate what is going on..., how they feel about something..., and what they would prefer to be different.' (Galbraith, 2018: 141) Since adopting this approach with the pupils, there has been more ownership by them of their education and provision. This has meant that the pupils buy into what the department is providing more, and have more confidence in themselves.

In speaking directly to the pupils about the perception of Learning Support at Eton, a majority of them said that they were apprehensive to start with, but once they saw first hand how the strategies and support were enhancing their education, they knew it was the right provision for them. As one year 13 pupil stated, 'Why wouldn't I take advantage of a resource that is going to help me progress not only with my academics but my confidence?'. Pupils are encouraged to voice what is actually working for them or to identify their sticking points.

Teachers at the College have noted that when it comes to differentiating their lessons, the recommendations provided by our department and conversations between them and the pupils have aided success at differentiating in their lessons.

We are aware of increasing openness to Learning Support through the number of pupils that say that they have recommended a friend comes to see us, or that they promote the department if they hear that a younger pupil in their house needs help. They also speak about siblings and friends receiving similar support in other schools, which to their eyes normalises the provision as something not unique to Eton.

With the development of the Tony Little Centre we were given a section of the building with individual classrooms and up-to-date resources. All staff, parents and prospective pupils have commented on the space and how welcoming it feels. Pupils have also commented on how the department's dedicated and modern space has helped them to want to attend and see it as fully integrated in the school. This is important to those who teach in the department, because we feel that Learning Support is not being 'hidden away in the attic'. The school's decision to situate Learning Support in CIRL clearly shows they recognise our department's centrality to a school and its importance.

True openness to needing support and Special Educational Needs and Disabilities is something we work hard to achieve. We want pupils to feel that they are always welcome, that the provision is a valuable resource, and that we are here to support and develop the pupils into more confident and self-aware learners. This is where there is a massive crossover between academic and pastoral support for the pupils within the department. A pupil who works with Learning Support on an ad-hoc basis said that when he started at the College the Year 13 boys would make fun of the new year 9 boys that attended Learning Support; now, however, 'the whole culture of the house and school has changed with regards to asking for help'.

To continue to encourage openness and support, we will train and offer advice to every one of the teachers and support staff that work alongside these pupils to ensure that they are meeting the needs of each individual. In doing such work, more and more staff and parents have started speaking openly about their own needs that they had when they were in school and the strategies they have used to ensure these have not held them back.

Through the support and acknowledgment from the leadership team that Learning Difficulties and Special Educational Needs are important aspects of the school, Eton College has been able to ensure they are providing a top-quality education to every pupil in their care. The number of pupils attending Learning Support is at an all-time high and the range of pupils and needs is very varied. These are a testament to the openness and inclusivity that is promoted within the College.

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DIVERSITY AND OPENNESS: HOW OPEN LEADERSHIP STRUCTURES WORK

In the final section of the journal, we have two pieces which make the case for open leadership structures in education. Jonathan Mace gives the example of the Finnish education system and what elements allow for open leadership in that context. Nicole Brigandi gives the example of an open leadership course at Eton College and shows how openness in leadership in schools acts as a catalyst for pupils having similar attitudes.

AUTHENTIC SCHOOL LEADERSHIP: LESSONS FROM FINLAND

Jonathan Mace | *Housemaster, Cheltenham College*

Finland has, over the last couple of decades, been a consistently high performer in the global education rankings. The Finnish education system is, to a large extent, one that allows authentic leaders to flourish. Wood's (2007) leadership authenticities, personal, social and ideal, coupled with Grant's (2017) need for authentic leaders to be vulnerable, open and driven by a wider societal mission, are ones that are evidently supported by the educational philosophy that underpins Finnish education. The late 1980s saw changes to the economic system in Finland and subsequently a widespread change to educational philosophy. It was these reforms that saw the inception of a more reflective coaching based educational philosophy, reforms that Sahlberg (2018) identifies as a significant contributory factor to the success of the Finnish system. Crehan (2016) opened my eyes to the power of comparative analysis between international educational systems and sparked a desire to become an 'educational tourist' myself. I visited Helsinki in 2017 to spend a week immersed in their system. This process, coupled with the analysis provided by Sahlberg (2015; 2018), Crehan (2016) and Walker (2017), brought to the fore for me that the Finns are in possession of a system that is truly conducive to authentic educational leadership.

What is authentic leadership?

The etymology of 'authentic' suggests a strong correlation with the desire to be both genuine and true to one's own beliefs: leaders' words and principles therefore need to be consistent with their actions. Bill George (2003, 12) states:

Authentic leaders genuinely desire to serve others through their leadership. They are more interested in empowering people they lead to make a difference than they are in power, money, or prestige for themselves. They are as guided by qualities of the heart, by passion and compassion, as they are by qualities of the mind.

George is clear with regards to the importance of leader engagement within the community to ensure that 'enduring relationships with people' are built and that the whole community is prepared to follow. Woods (2007) argued that it is important that authentic leadership rises above 'inward looking individualism' of self-evaluation and self-belief. Woods states that authentic leadership comprises three interrelated values in action:

1. *Personal Authenticity*: the leader is true to themselves and takes opportunities to develop as a professional by acquiring self-knowledge.
2. *Ideal Authenticity*: the leader aspires to professional ideals and to fulfil their potential as a leader.

3. *Social Authenticity*: the leader is faithful to meeting the expectations, values and beliefs both of the school community and of the wider community served by the school.

Grant (2017), drawing on the work of Brene Brown, defines the authentic leader as one who has 'the choice to show up and be real, to be honest and let our true selves be seen'. This is often very hard for school leaders (and humans per se), since presenting, or unveiling, the mask of true self is often uncomfortable, daunting and underpinned with a feeling of loss of self-control.

Grant argues that there are four key qualities that are often found in authentic leaders:

1. *They are deeply connected to their passion and purpose*

Authentic school leaders have a deep-rooted inter-connectedness between knowing themselves, what they stand for, what they want to achieve and why they have chosen to take on school leadership. They are able to articulate their school's vision, see the bigger picture and maintain motivation even when times are tough.

2. *They lead with integrity*

Authentic leaders have what Aristotle would call a 'phronetic eye': every action and decision is taken with their values and purpose in mind. They have the leadership courage to do what they believe is necessary or right, even when the decision is an uncomfortable one.

3. *They know their own strengths and weaknesses*

The authentic leader is able to make the full use of their strengths for the benefit of the school but are prepared to be honest with themselves as to the areas of their leadership that they need to improve. Self-reflection gives leaders a more effective lens for spotting talents and strengths of their staff and how these identified talents and strengths could best benefit the wider school community.

4. *They have the courage to be vulnerable and open*

An authentic leader understands that vulnerability and open communication are critical for truly authentic and meaningful connection. These leaders model humility and openness and therefore staff feel empowered to do the same.

The Finnish System: why is it conducive to authentic leadership?

Analysis of the Finnish education system, from both a visit to Helsinki in August 2017 and through analysis of the literature of Crehan (2016), Sahlberg (2015; 2018) and Walker (2017), indicates that the Finns have in place an educational culture that encourages authentic leadership.

The Finnish system is one of minimally invasive education, which is deep rooted in equality, inclusiveness, and creativity. Schools are seen as learning communities; communities in which both students and staff learn, reflect and are given autonomy over their own learning journey. Teachers are of the highest quality, drawn to the profession by a deep social conscience and are trained in research-based educational thinking which informs their continually reflective approach to teaching and learning. Within schools, and because of this individual teacher autonomy, there is a flat organizational hierarchy where a culture of implicit trust between professionals permeates throughout each institution. Any changes to the national education system involve all key stakeholders, including the business sector, to ensure reforms are supportive drivers of wider Finnish economic development.

During the educational reforms of the 1980s, the Finns were critically reflective of their system in order to make changes for wider societal benefit. Sahlberg (2018) argues that this ingrained societal coaching philosophy goes a long way to explaining the strong professional and collaborative culture of teaching and learning within the Finnish system today. Grant (2017) places equal emphasis on the need for authentic leaders to be courageous in being 'vulnerable and open'; the culture permeating Finnish education is one that allows this to be the case. Hart (2017) alludes to the importance of this coaching culture when stating that teachers have annual discussions with school leaders, where the feedback is given to teachers on individual strengths and weaknesses. These strengths and weaknesses have been identified by the individual appraisee prior to the meeting. This coaching culture is also a result of the more tangible elements of the Finnish system including the structure of the working day. Teachers in Finland have 15 minutes of every hour (due to breaks between every lesson) to recharge, reflect and talk; teachers are themselves being given the conditions to be authentic, and given the flat organisation hierarchy, to develop into authentic leaders in their own specialist areas. There is, therefore, evidence to suggest that to a greater extent the Finnish system has in place a structure and a philosophy to allow authentic leadership to flourish.

The Finnish system is one that continues to evolve for the betterment of society. It is fundamentally grounded in the belief that all Finnish students should have equality of opportunity to learn. Students jointly learn with teachers in 'learning communities', where staff draw on the latest educational research to be continually reflective of their own practice in order to enable students to learn in the most effective way.

AT THE HEART OF THE FINNISH EDUCATION SYSTEM ARE REFLECTIVE LEARNING COMMUNITIES UNDERPINNED BY BOTH STAFF AND STUDENT AUTONOMY.

It is this self-reflection supported by other contributory factors - a relatively flat organization hierarchy, regular breaks between lessons and teachers identifying their own strengths and weaknesses in appraisal - which provides a runway to individuals 'looking in the mirror' (Berkowitz 2012) and, in turn, encouraging them on a journey to become authentic educational leaders.

The Finnish system has in place a structure and philosophy that allows its leaders to be authentic; it has a system much more conducive to authentic school leadership than many comparable education systems in the world.

Conclusion

At the heart of the Finnish education system are reflective learning communities underpinned by both staff and student autonomy. To build greater authentic educational leadership within the UK, time and space would need to be created for teachers to be reflective, researched-based practitioners, who are given greater autonomy over their professional lives. This of course is more easily said than done, with pressures, both political and economic, impacting on all parts of the UK education system; but a willingness to look more readily outwards and to learn from other systems across the world is, in itself, a reflective and powerful step.

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OPEN LEADERSHIP IN AN EDUCATIONAL CONTEXT: INSIGHTS FROM ETON COLLEGE

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Openness in education has been defined in many ways over the centuries. The concept of openness has been regarded as ‘not only a technological, but also a social, cultural and economic phenomenon’ (Peters & Deimann, 2013). From an educational context, openness can be recognised in the form of access to free education and learning resources, technology-enabled education (e.g. MOOC – Massive Online Open Course), distance learning and other forms of classroom innovation (e.g. student-driven education, flipped learning). However, management theories mainly describe the concept of openness in the context of leadership and culture, using terms such as transparency, inclusion, collaboration and trust.

At the start of January 2019 we launched a professional development pilot programme on the topic of Open Leadership. Twelve brave and eager managers from across all corners of the College were brought together to define what openness means at Eton, and how it can enable Eton’s strategic plan. Their work together has set in motion a shift in practising greater openness in the leadership of their day-to-day roles. Throughout the programme we’ve considered the underlying question of how infusing a culture of openness can impact the principle aim of the school: to provide the boys with an ‘outstanding, progressive and well-rounded education’.

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What's at stake?

Today’s leaders are faced with constant complexity and ambiguity, sometimes falling short of the skills needed to navigate our fast-paced world. In September 2017, the ELT published a five-year strategy to recognise the pace of global change and the opportunities Eton has while it needs to adapt its approach whilst maintaining its legacy. Indeed, the leaders of tomorrow require a set of skills and experiences which prepare them to innovate and collaborate with openness to possibility, diversity and the unknown.

Schools which recognise that learning is not just about what happens in the classroom are more likely to create the shift from learning institution to learning organisation. In a learning organisation, learning is a mindset. Every instance of ambiguity, failure and success is a chance to understand the environment and develop capability for continuous fine-tuning. Influencing this mindset requires a dynamic alignment between strategy, culture and leadership.

Role of strategy, culture and leadership

There is an inextricable link between strategy, culture, and leadership which set the tone in an organisation. Harvard Business School Professor Boris Groysberg and colleagues describe strategy and culture as ‘the primary levers at top leaders’ disposal in their never-ending quest to maintain organisational viability and effectiveness’ (Groysberg, 2018). If strategy provides a view on where we are going, then culture signals who we are and who we need to be to get there. It is the job of a leader to weigh each side of strategy and culture.

Arguably, leaders in schools stand to have an even greater impact on the world than in most other professions. We learn to be the people we are based on the influences around us. For students, and particularly those in a boarding environment, the leadership models they experience while at Eton will leave an imprint on who they become as adults. This extends beyond the classroom and boarding house to include the implicit culture inherent in how the school operates as a whole. Thus, the school culture that surrounds students becomes their most influential teacher.

Openness in Education

Consider the case for a closed culture. By definition, closed is described as rigidly excluding others’ ideas; rejecting the ideas, beliefs, opinions or influence of others; not admitting outsiders. In organisational terms, this manifests in a lack of diversity, or unwillingness to accept ideas that are new or different. A closed culture can foster a fear of speaking up, leading to avoidable mistakes, fixed mindsets and increased risk of unethical behaviour (Edmondson, 2018). This approach can be effective for survival but stifling to the human learning process.

Now let’s consider the case for openness. Openness indicates behaviour that is honest and not deceptive; someone willing to listen; tolerance to something that was once locked. When asked to define open culture, the Open Leadership cohort described a transparent and empowered environment where people feel confident to take measured risks, show a willingness to learn over making assumptions about the unknown, share information and knowledge, practice giving and receiving feedback and reinforce a balance between autonomy and everyone singing from the same hymn sheet. This will be evident in pockets throughout the organisation. Creating cultural consistency, however, is reliant on the strength and alignment of leadership.

While tone from the top is a key driver of culture, the possibility and potential of an organisation are activated when there is a leader in every chair (Zander & Zander, 2000). It’s the responsibility of all people in the organisation to practise openness in their own role and capacity in the broader system.

Applying an open leadership style to learning and education unlocks the space for learners to share new ideas, to innovate, to listen to dissenting perspectives and to navigate failure through learning. These are all signals of psychological safety, a key predictor of high performing teams (Edmondson, 2018). This enables an environment where students are able to make cognitive and social connections to deepen their experience and retention.

Making a shift

When it comes to leaders shaping an open environment to promote learning, what got us here might not get us there. To succeed in navigating complexity, leaders need to develop characteristics of ‘transformational leadership’ such as self-awareness, vulnerability, humility, collaboration,

empowerment, dynamic communication and constructive conflict management. Demonstrating these traits in the professional work environment serves as a fundamental lesson in setting a cultural tone for students to absorb.

The Open Leadership cohort has spent months practising these traits in how they ‘show up’ as leaders and observe the environment around them. However, as author Daniel Coyle says, ‘Cooperation does not simply descend out of the blue. It is a group muscle that is built according to a specific pattern of repeated interaction (Coyle, 2018).’ It takes a coordinated and persistent effort across the system to observe a meaningful shift. The potential impact of small changes in leadership at every level can be significant. Role modelling transformational leadership characteristics reinforces a culture that values learning in and out of the classroom. Students who are able to practise openness in their formative years become humble, transformational leaders who need not fear the challenges they will face.

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