NAACE

THE EDUCATION TECHNOLOGY ASSOCIATION

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Political Issues, Learning Platforms, Resourcing & More..

A letter from the chair of Naace

Dear Members,

I am writing this introduction to the winter edition of the Advancing Education Journal on the day that the government's requirement for schools (in England) to provide remote learning comes into operation. For some schools this is during half term and for others it is as half term is about to begin. Whichever situation your school finds itself in, it is a new and challenging requirement. However, assuming your school's facilities are ready for action, it is the members of staff who are, again, being asked to dig deep and support pupils who are not able to attend school, as well as the pupils who are able to attend. This means that a variety of techniques is required to support their pupils as well as their colleagues. Delivering the same materials face to face and over a virtual lesson system make very different demands on staff from a technical, confidence and energy point of view. Many of us adults are finding that long meetings using virtual systems (Zoom, Teams, Skype are but a few) are very tiring and to get the best out of everyone we need breaks during these sessions. So how do our young people feel in these situations, possibly having to get used to new techniques for problem solving or a new approach to solving a maths equation? Has anyone asked them? There are also staff and pupils who have to isolate but don't have particularly reliable or fast internet connections at home. That can make just taking part in a virtual lesson a nightmare, never mind leading it!

So we still have a number of areas where we need to develop skills, technologies and understanding. The Department for Education has published a number of documents to assist and will be publishing further support information in the future. A sample can be found at:

https://www.gov.uk/government/publications/remote-education-temporary-continuity-direction-explanatory-note

At the beginning of these difficult times back in March, Naace began thinking about the effect these changes would have on staff and pupils. The result of these discussions was a survey during the summer that over 1000 school staff completed. In the last edition we mentioned this as a tempting initiative that would start to see the light of day in this edition of the journal. Whilst all the analysis may not be quite complete, you will find a small number of interesting results from the survey in this issue. We hope to publish the full results of the survey during November and will circulate the location of the report on our web site and through the newsletter and social media. I think it will pose more questions than it answers, but some would say that's the whole point of research, to find out the questions that need to be asked and, in the fullness of time, answered.

Thank you to all our contributors and to Christina Preston our editor, our editorial board (featured in the last issue), Theo Kuechel who provides our technical and layout expertise and Alison Blackburn, our proofreader. All the views expressed in the articles are those of the authors and not necessarily those of Naace, The Educational Technology Association.

The Board of Management of Naace, the BoM (as it is politely known!), would like to thank all our members, in schools and supporting schools, for their unstinting work throughout the Covid pandemic in helping pupils and colleagues. We would also like to thank all the staff of the NHS, Care Workers and those involved in the transport and supply chains, including those manning the shops we all need to ensure that much needed supplies get to all of us. THANK YOU

Phil Blackburn
Chair Naace Board of Management
22/10/20

Contents

EDITORIAL

Digital political issues

In the first three articles of this journal the authors discuss how the policies of the political party currently in power impact on our system in the UK. In fact, Sebastien Chapleau suggests that we do not spend enough time in school on the political influences that students will be exposed to in their social media accounts. Norbert Pachler and Keith Turvey offer a persuasive argument indicating that attention to digital policies in school in the UK have been inadequate since the Conservative and Liberal coalition government took over in 2010.

In his argument, Chapleau points out that so much of what shapes our lives is linked to political decisions. And so many of these political decisions are shaped by social media. Pressure groups increasingly use platforms such as Twitter to critique – and often criticise – government decisions and often mount campaigns harnessing the power of their hundreds, thousands, even millions of followers.

Likewise, political officials often use platforms like Twitter to share their news. Indeed in a democracy a free press and social media could be ideal media for citizenship engagement. But whilst our pupils engage in what many see as trivial fun, dance videos, and fashion shots online out of school, we often do very little to promote their engagement with 'political' issues that shape their lives through the technology available to them. Digital Literacy has certainly been a casualty of the changes in the curriculum in 2014.

Professor Christina Preston

Professor Christina Preston has been at the forefront of education and technology for over 25 years. She has been a member of Naace since the 1980s and is the editor of the Naace Advancing Education journal. In 1992 founded The MirandaNet Fellowship whose members have become global thought leader in EdTech with over 1,400 members in 80 countries.

At the core of the members'' philosophy is the sharing of knowledge and change management based on grassroots evidence and research. The members work with EdTech companies to research into the impact of technology and learning in classrooms and report on their findings for the global community. Christina has won 5 international awards for her contribution to education innovation and community of practice development. international awards for her contribution to education innovation and community of practice development.

Keith Turvey and Norbert Pachler remind us that, in this present time, the coronavirus pandemic has led to significant disruption to school education in England. Teachers have made a concerted effort to use digital technology and remote teaching and learning to lessen the impact of this disruption on their students. However, thanks to a decade of unambitious government policy, many have faced an uphill struggle. A general lack of preparedness for digital technology in England has left many children without the tools they need to access and benefit from remote learning. The authors plead for support for teachers both by government policy and research to help them develop expert knowledge on the use of digital technologies. They warn that failure to do so may simply mean re-learning the same lessons over and over again. To help teachers prepare for the unknown challenges ahead, as a profession, they say, we must build on the lessons of the past.

Algorithms have only been discussed as an element of popular news very recently. Indeed, they have been receiving a bad press this year for redefining exam results and for some of the debatable statistics from Covid 19 related testing. This is surprising as last year very few people knew what an algorithm was. Chris

Yapp goes further than discussing the pros and cons of overriding teachers' judgements using algorithms. He questions whether exams were fair even before this latest upset.

Perspectives on virtual learning environments

Virtual Learning Environments(VLEs) have been very much in the news because so many schools were not well prepared to teach online at the height of the pandemic. First Preston and Younie describe the early history of VLEs at the turn of the century. Indeed, because of the British early adoption of online learning, supported by the Labour Government, the MirandaNet Fellowship, an international professional organisation based in the UK, was chosen by Oracle to lead in their research and development in education rather than an American research consultancy. Larry Ellison who was the co-founder, executive chairman and chief technology officer of Oracle Corporation set up a charitable arm, The Oracle Education Foundation, that donated significant funds to philanthropic causes. The first project was a VLE called 'Think.com' for school pupils that was, in fact, an early precursor of Facebook, used from 1999-2002. The authors explain how this early virtual platform was developed for schools and the fate of this enterprise.

Stuart Abrahams, an expert consultant, considers what has happened since government enthusiasm for supporting digital technologies in school waned. Many schools stopped using them after the government financial support stopped, often because so many of their teachers were not receiving adequate training in their use. Stuart suggests questions senior leaders should be asking if they want the adoption of a VLE to be a success.

The big picture: resourcing and training.

The kind of questions that Abrahams is suggesting would fit well into the big picture thinking being undertaken by John Sibbald for Manchester City. Those overseeing education in this Northern stronghold are to be congratulated in understanding the need for digital skills in the future by undertaking an audit to establish the current situation in schools in the Greater Manchester region. This is commendable because so often digital systems develop piecemeal in a school. A road map will be very welcome to many school leaders.The article by John Sibbald addresses the issues that need to be addressed if schools are to plan for a viable future.

Whereas John Sibbald addresses the management of change issues across the school, Liz Hidson reports that the global shift to online learning has also been accompanied by an upsurge of interest in online research methods. Increased access to video calling, as well as greater confidence in the technology means that those interested in research may find it easier to move research into online spaces. Liz offers some online research methods she has developed for Masters Level PGCE trainees. The findings will help them make decisions in school.

Alison Hramiak, also a teacher trainer, explains how her trainees feel in the lockdown. The completeness of lockdown had curtailed their training, and many felt cheated of what should have been the better end of the teacher training year. The time where they got to see the results of all their effort and hard work - having taught their own students all year. They felt it was time to reap the rewards in terms of the success of their own learners. Alison explains how they overcame this disadvantage by using their digital skills in her article, A mixed bag: Trainee teachers' stories of their early experiences of teaching online.

Creating classroom resources

Finally, Ian Rae encourages teachers to experiment in producing animations, which could be used for teaching lessons to primary school children. He reports on animation software which, at a reasonable cost, can deliver higher quality characters and also employ little animation routines delivering the ability to add

make the characters walk, jump and achieve all the basic types of human and animal motion. At the same time these characters can be made to speak by automatically synchronising the mouth movements with the voice which was recorded minutes before. The animations Ian has made are not just informative, but also fun. Just what we need in these difficult times.

Other news

Talking of difficult times we also cover new Naace research about the impact of Covid 19 that raises some interesting points. Members have also recommended useful videos and blogs. Finally if you do not find time to read books we have supplied four entertaining book reviews that give you a summary.

As you will all know now BETT21 has been cancelled and the next in-person Bett show will take place on 19-21 January 2022 at ExCeL London. But there is more news about the virtual BETT21 below.

I hope you will find this edition varied in content as well as challenging. Naace is very keen to publish members' articles particularly those that promote debate and discussion.

Warm regards to you all,
Professor Christina Preston

Political issues

To stay, or not to stay, within our comfort zone

Sebastien Chapleau

Image Credit: 1987 [Brizzle Born & Bred.](#) CC BY SA

Preamble

So much of what shapes our lives is linked to political decisions. And so many of these political decisions are shaped by social media. Pressure groups increasingly use platforms such as Twitter to critique – and often criticise – government decisions and often mount campaigns harnessing the power of their hundreds/ thousands/millions of followers. Likewise, political officials often use platforms like Twitter to share their news.

In a democracy, a free press and social media could be ideal media for citizenship engagement. But whilst our pupils engage in what many see as trivial fun, dance videos, and fashion shots online out of school, we often do very little to promote their engagement with 'political' issues that shape their lives through the technology available to them.

To rock the boat, or not

We are creatures of habit. Despite the fact that many of us claim that we like 'taking risks', we rarely do. We do what we always do. Rarely do we ever 'rock the boat'.

We have become a society that doesn't do politics. We talk about it – lots! However, people's participation in democratic activities is on the decrease – not only voting, but also campaigning/fighting for what we believe is right.

Alinsky argued, in his Rules for Radicals, that Community Organisers need to stay within the experience of our communities. Ironically, he argued this point to ensure that people do get out of their comfort zones and act more politically than they would otherwise do. The world, as it is, is a world where the powerful aim to keep things as they are. It works for them. Why change things that work? To build a world as it should be, it therefore takes people who are willing to subvert the status quo. Change rarely happens without tension.

In our schools, things are very prescribed: there are frameworks (Ofsted, the National Curriculum, assessment frameworks and their connected progress measures), there are structures, and these are often resting on rules set by people whose self-interest is not to question the world as it is. Remember, the world

as it is works for them, so why change it?

I've argued before that teachers can easily become tactical disruptors. Building on their experience of teaching the skills required for children to succeed within our current system (e.g. reading, mathematics, writing, etc.), elements of disruptions can easily be added to the mix.

In the school I led for over six years, we started with the following postulate: it is our duty to make the world a better place through everything we teach. What we teach in terms of knowledge and skills, consequently, has to revolve around that. If not, we often tell prospective families, we've missed the trick.

There is nothing radical as such in our approach. Simply, we start with what Simon Sinek talks about in his Start with Why. Why do we do what we do? What's the point? Our point is that it is politics which makes the world go round. It is people getting involved and taking ownership of what they want society to look like that make our lives more meaningful. The choice to be a shaper of society – as opposed to a receiver – is exactly that: a choice.

School leaders interested in change need to not shy away from politics. As Cicero wrote, 'Citizens are made, not born'. Democracy is learned by doing, good practice and eventually 'informed consent'. And that's tricky, because we're told to remain neutral. Neutrality paralyses us and we therefore never reach 'informed consent'. Doing so is exactly why our world either stagnates or derails in ways which, personally, bother us. How to reconcile this tension between the need to be neutral/impartial and the need to realise that politics isn't neutral is a key question we need to ask ourselves – openly.

Neutrality: the enemy of justice

Politics, as people mostly define it, is mostly partisan. And that's where we often get stuck. We have to take sides and that makes us biased, something many frown upon within schools. But politics doesn't have to be – and, in fact – shouldn't be partisan. Politics should simply be about 'informed consent', reached through dialogue and the need to establish what works for me, beyond me. In the words of Rabbi Hillel: If I am not for myself, who am I? When I am only for myself, what am I? And if not now, when?

Veteran Community Organiser Mike Gecan recently argued, in an op-ed published in the New York Daily News, that we need to be much more fluid about our political views. Having to stick to a 'party line' isn't healthy. So, taking this back to experiences we, as teachers, are very familiar with, let's do something straightforward: let's talk about what we believe is right in terms of the challenges our communities face and let's take on those who have the power to affect the change we seek and convince them that they need to implement the changes we believe are right.

Take the issue of Pupil Premium funds being used by some private sector companies to the disadvantage of vulnerable families: the fact that some companies don't give students in receipt of the Pupil Premium the change they're entitled to when they purchase meals (charging them the full equivalent of their Pupil Premium allowance, without giving them their change back when using less than said allowance) is wrong. Taking on those private companies and/or the Local Authorities that use them doesn't make us partisan or anti-capitalist: it simply makes us justice seekers.

Linking this argument to the way we shape our curricula and engage with social media, let's teach our students how to harness the power of the internet and social media. Let's teach them to engage – and, arguably, protect – our precious democracy. This should not be something that will get you into trouble. Or if it is, I'd argue it'd be #GoodTrouble.

Taking action

Let's open up a wider dialogue between teachers, students, and families within our schools so we establish what our views are and let's make our teaching clearer about what we stand for and how our curricula can meet the wider needs of the society we have the power to shape. Let's not shy away from saying what we think as school communities. And more than that, let's act on what we believe is right for, as we've said before, it is not hope that leads to action but rather, it is action that leads to hope.
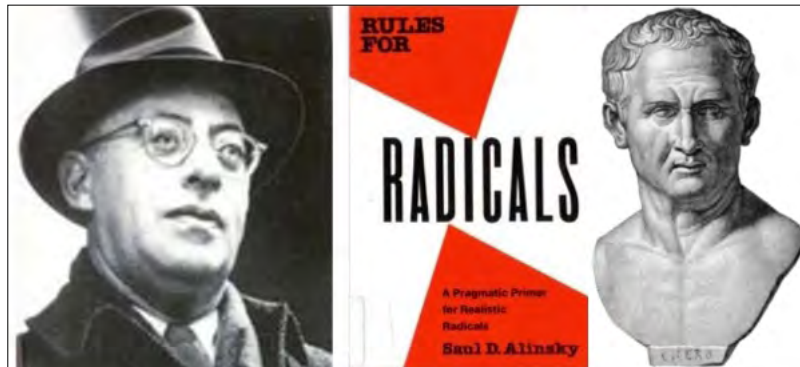
Author: Doctor Sebastien Chapleau

Doctor Sebastien Chapleau is currently Headteacher in Residence at Citizens UK, the largest alliance of civic organisations in Europe. He's also Senior Associate at Innovation Unit and a Director at Whole Education. He has been supporting school leaders on issues of civic leadership for over 10 years.

Prior to training as a Teacher and becoming a Community Organiser, Sebastien studied for a PhD at Cardiff University, where he wrote a thesis on children's literature and critical pedagogy. Sebastien trained and worked with Citizens UK, where he spent a lot of his time coaching head teachers across London, supporting them around issues of youth leadership and community engagement.

Sebastien founded La Fontaine Academy and was its Headteacher between 2014-2020, establishing from scratch what quickly became a thriving community school, heavily focused on student leadership and on ensuring that parents, teachers, students, and neighbours work together to take responsibility for the wellbeing of their neighbourhood.

Sebastien's positive contribution to community life was recognised in 2012, when he received a Community Champion Award from then Mayor Boris Johnson. More recently, the Company of Educators – a Livery Company in the City of London focusing on Education – decided to give him their Inspirational Educator Award for his contribution to education in the UK.

Teachers let down by a decade of inaction on digital technologies

Keith Turvey and Norbert Pachler

Edtech a decade ago Image Credits: [Brainpop](#), [Danny Nicholson](#)

The coronavirus pandemic has led to significant disruption to school education in England. Teachers have made a concerted effort to use digital technology and remote teaching and learning to lessen the impact of this disruption on their students.

However, thanks to a decade of unambitious government policy, many have faced an uphill struggle. A general lack of preparedness for digital technology in England has left many children without the tools they need to access and benefit from remote learning.

Our recent research shows that teachers have been hampered by weak policies surrounding technology, supported learning, and by the research behind these policies. To unlock the educational potential of digital technologies in the future, teachers need support which focuses on innovation and practice.

A decade stood still

The importance of using digital technology in teaching, and some of its associated challenges, were established well over a decade ago.

However, the coalition government of 2010 brought in policies that increasingly neglected the role of digital technologies in education. It began with the closure of the British Educational and Communications Technology Agency in 2011.

This organisation faced some justified criticism, including for its tendency towards uncritical adoption of educational technology. But it did play an important role, supporting schools in their attempts to acquire and integrate digital technologies in the classroom.

Teachers and teenagers using tablets and laptops.

In 2013, the National Curriculum for England was reviewed. Changes included the end of the expectation, established in 1999, that the critical use of digital technologies in education was an important key skill, and that it should be supported both through the subject of information and communications technology (ICT) and in pupils' use of ICT across the curriculum.

Past standards required trainee teachers to develop their knowledge and skills in ICT in their teaching practice and wider professional work. However, all references to the use of digital technologies for teaching and learning were removed from the 2010 Teacher Standards which trainees need to demonstrate in order to gain Qualified Teacher Status in England.

These policies, as well as an era of real-term cuts in education funding, have left many schools' access to digital technologies weakened. It is not surprising that many, though not all, have found the move to remote and digitally-supported learning during the coronavirus pandemic challenging.

Unlocking future potential

Research on the use of ICT in schools has an important role to play, involving teachers in identifying what works and what doesn't. But the research used to inform government policy on ICT over the last decade has failed in this regard.

The Education Endowment Foundation (EEF), funded by the Department for Education, has produced research which only adds very high level, comparatively common sense insights, such as that the use of technology should not be an end in itself.

Back in 2004 we already knew that effective teachers make their own critical judgements about how to use digital technologies. They do this by blending their knowledge about their subject, their knowledge of how learners understand it, and how the features of digital technologies relate to such knowledge. But a lack of support for teachers to hone these practices means that this knowledge is not passed on or developed.

The education sector has to constantly re-learn lessons about the unique challenges of integrating technologies into education. Different levels of access, as well as different attitudes towards or ways of using digital technology, can have an impact on the effectiveness of teaching and learning. But many trainee teachers are left to develop this understanding by chance.

Teachers may develop innovative ways of using ICT which are not then improved or passed on.

The Core Content Framework for Initial Teacher Training in England, which sets out the minimum entitlement for those in initial teacher education, perpetuates this shortcoming. It makes no reference to technology-supported learning.

In our research, we introduced the idea of "pedagogical provenance". This means valuing teachers' stories of how methods of teaching using digital technologies came to be used – like understanding the history of an object or artefact. This could include how video conferencing has been used to explore art exhibitions, or how text messaging among pupils can improve literacy and spelling.

Knowing the purpose and the context of how a particular teaching method or digital tool was introduced helps guide teachers' future decisions about how to adapt them to their own classroom. But this kind of detail is so often absent.

For instance, a review of research on the use of tablet devices in education found that there was a lack of detailed explanations provided to teachers "as to how, or why, using tablets within certain activities can improve learning".

Teachers need to be supported by policy and research to help them develop expert knowledge on the use of digital technologies. Failure to do so may simply mean re-learning the same lessons over and over again. To help teachers prepare for the unknown challenges ahead we must build on the lessons of the past.

Authors: Dr Keith Turvey, Norbert Pachler

Dr Keith Turvey is Principal Lecturer, in the School of Education, University of Brighton. He joined the University in 2003 after a career as a primary teacher of 15 years. He teaches on a range of undergraduate and postgraduate programmes. His research interests include digital pedagogies and the professional learning and development of teachers.

Norbert Pachler is Professor of Education at the UCL Institute of Education. As Pro-Vice-Provost: Digital Education at UCL, Norbert makes an active contribution across all aspects of the Office of the Vice-Provost Education and Student Affairs on UCL-wide initiatives, with a particular focus on academic oversight of digital education across the university

Disclosure statement
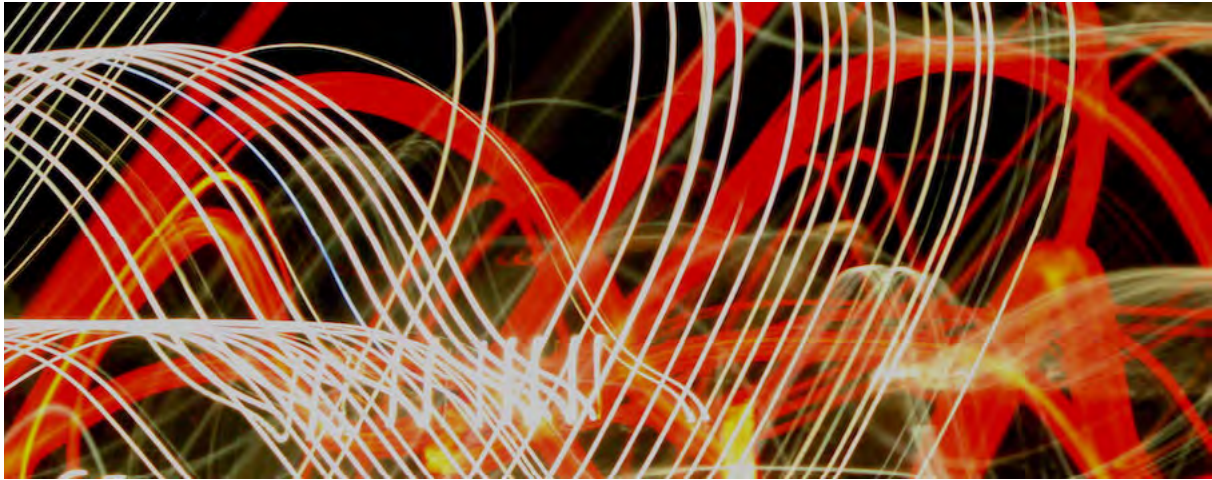
Exam fever: can you trust an algorithm?

Chris Yapp

Image Credits: Kevin Dooley CC BY

The fallout from the A level results and the GCSE results is uncomfortable for government and upsetting and challenging for teachers and students alike. Arguments over whether this year's results are robust and fair are often blaming the algorithm that was used to reassess the teachers' marks. This approach that denies professionalism is bound to annoy teachers. Surely the estimation of a pupil's capacity is far too nuanced to be subjected to the analysis of a software designer?

But I want to approach this discussion from another angle. Put simply; " Has the exam system in England ever been robust and fair for individual pupils?" For those of us who did well in exams and whose children also did well, it is too easy to be confident. Accepting that our success and others failure is a systemic problem not a result of competence and capability is not easy.

Let me be clear, I do not have confidence in the exam system in England as a measure either of success or capability. Take for instance the argument that teachers over estimate grades. Where is the evidence that that is the case rather than that the exam system misses what teachers see? On that I am neutral. For me the evidence works both ways.

I have appealed in the past against teacher grades because they were (in my opinion) too low. One individual got a 2.1 and masters at a University that would not have offered a place on the basis of teacher grades. That's OK if like me you know the system and have the confidence to challenge. What about those less fortunate? A recent example is an Eton Educated Nobel prize winner who was told by a teacher that he would never make a scientist.

I think that it is important to describe what a robust system would look like, in my opinion, and to show why the current system should not be seen as such. Try this as a thought experiment. Imagine that I gave an exam paper submission to 100 examiners. Let me assume that it "objectively" is a C grade. Would all 100 examiners give it a C? If not, what is the spread? Is the spread the same for English literature, Physics and Geography as just 3 examples. If you cannot provide clear evidenced answers to these questions, how can you be confident that the system is objective?

If we look at the examiners, the same challenge appears. Are all examiners equally consistent in their marking, or do some tend to mark up or down? Where is the evidence, reviewed and published to

demonstrate robustness? We also know that the month you are born still has an effect on GCSE grades. What is robust about that?

So what does objective look like? Imagine the shy boy answering a question on Romeo and Juliet. He wonders why he is drawn to Romeo and not Juliet. How do you know that it is his literature understanding that you are marking? If you think that is unfair, let me illustrate with an example. Some years ago, I sat in on a filming in a school where the pupils had been engaged in developing the schools policy on bullying. The maturity of the children in a school that was pretty mainstream was impressive. One girl talked about a boy in her class who was being bullied. She was 12-13. She offered the opinion that " he was probably gay but didn't know it yet". Importantly, the teachers did not know that the boy was a victim of bullying.

When my eldest son was doing his GCSEs one of his teachers told him "you will lose marks for knowing that". If a teacher feels that, correctly or incorrectly, then this is a sorting game of sheep and goats, not a measure of achievement and capability. I have known children who have missed out on grades after divorce, separation and death of parents, siblings and pets. I cannot objectively give a measure of the impact, but then neither can the exam system. I would add that I suspect a classmate of mine missed out because of hay fever. Children with health issues such as leukaemia and asthma whose schooling is disrupted have had their grades affected every year, not just this one.

So, the high stakes exam system is, for me, a winner takes all loaded gun embedding inequality and privilege in the outcomes. Can we do better? Well, if we want to use exams, then each paper needs to be marked by say 5 independent assessors. If they all agree on a "B" then that is a measure of confidence. This is often a model used for assessing loans, grants and investments in businesses. It does not guarantee success of course, but what it does do is reduce reliance on potentially biased individuals. If I was an examiner and woke up today in a foul mood, would I mark a paper the same today as yesterday? I would not bet on it.

The really interesting cases in my experience are where you get 2As a C and 2Ds for instance. In my experience, I've seen it more often in "creative subjects", but some non traditional thinkers in subjects like mathematics (a highly creative discipline, by the way) often don't fit the narrow models of assessment of our exam system. The problem with this example of bringing people together to try to get a consensus on a "B" eliminates the value that comes from the diverse views and the richness of the different perceptions.

So, for me, for a system to be robust it has to have more than one measure to allow the individual, parents, universities, FE and employers access to a richer view of an individual. If someone got an ABCD in English that is as interesting as someone who got straight Bs. Some years ago at a Conference I was talking to a teacher about a gifted pupil, "Tom".

Tom lived for poetry. He had written poems since he was 10. He memorised many and could recite fluently without notes. Within a week of discovering a new poet he could attempt writing a poem in their style. With a play he would always volunteer to be part of a reading. However, novels bored him. He switched off and was difficult to engage. Let's grade him, A* (Poetry), B (Play), D (Novel). What is a fair grade that reflects his achievements and potential? A Grade of B is there to meet the needs of the exam system, not the learner. The nuance is lost by an overall grade. Interestingly, if I had that discussion today, I would probably suggest audiobooks.

More importantly there are already models that command respect in grading skill levels. Parents are quite happy if a child is doing grade 6 piano and grade 2 flute at the same time. They are quite happy for a child to sit when ready and have the chance to resit. Yet in the school setting the pressure is there for a child to be at level 8 say for all subjects. That puts unnecessary pressure on pupils, teachers and schools. Imagine how

society would react if you could only take the driving test once at 17 and barriers were raised to stop you retaking it.

I feel sorry for the students, their families, teachers and their schools in the current tragedy. It is about time that we acknowledged that we have the "emperor's new exam system".

This year's bizarre algorithmic system is not robust, but then we have never had a robust system as far as I am concerned. Let's open our eyes and build something that we should have more confidence in. Carpe Diem.
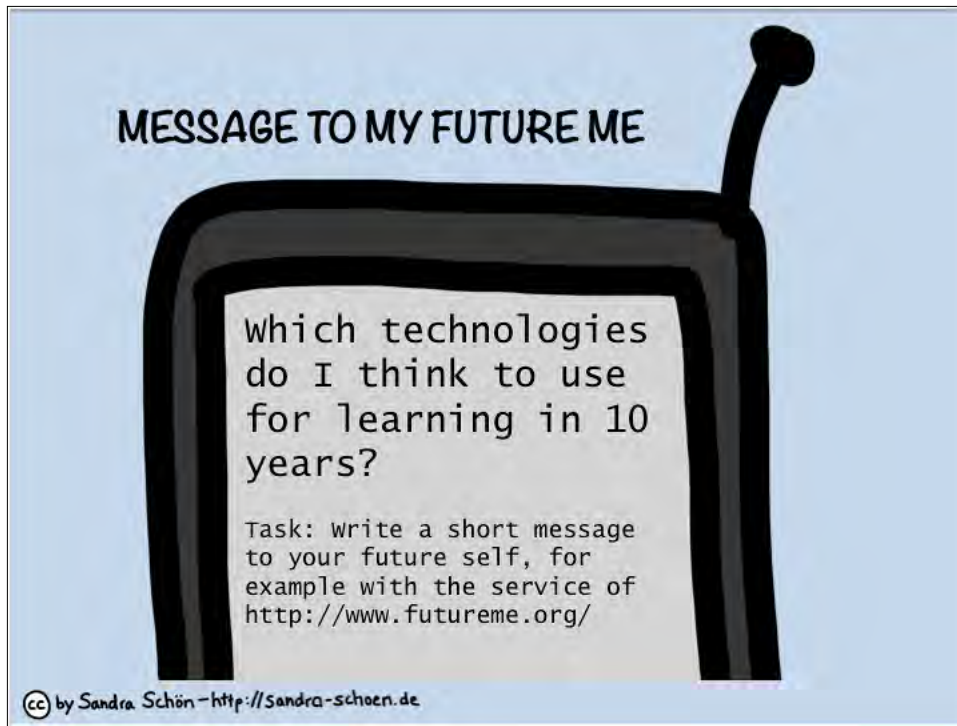
Author: Chris Yapp

Chris Yapp is a Futurist with a long term interest in education and technology. He is a Fellow of the BCS and the RSA. He is a patron of NACE and a member of MirandaNet.

Perspectives on Virtual Learning Platforms

The history of virtual learning platforms in schools

Christina Preston and Sarah Younie

MESSAGE TO MY FUTURE ME

which technologies do I think to use for learning in 10 years?

Task: Write a short message to your future self, for example with the service of http://www.futureme.org/

(cc) by Sandra Schön – http://sandra-schoen.de

Turvey and Pachler, both senior MirandaNet Fellows, explain in the article above how British teachers have been let down by a decade of political inaction on digital technologies. They maintain that the way "to help teachers prepare for the unknown challenges ahead we must build on the lessons of the past" . In this context, professional organisations like Naace, MirandaNet and the Technology Pedagogy and Education Association (TPEA) all have a corporate memory that is very important in this learning process. So in this article, the authors, who are also members of these professional communities of practice, describe the beginning of virtual platforms in school that they have been involved in during the 2000s. The hope is that this history will be valuable to younger professionals who have endured a baptism of fire in virtual platforms as the pandemic has taken hold.

In this context, a short history of research and development in education technologies is important because the issues that emerged at the turn of the century are still in existence now. In the U.K the internet was opening up in education from 1997 when the government funded the National Grid for Learning (Younie, 2007). A key stimulus was the commitment of the New Labour government to digital education in 1997 which meant that, in the first decade of the 21st century, UK educators were world leaders. One of the reasons was that the UK was seminal in designing a national curriculum that had three compulsory strands: Literacy, Numeracy, and Information and Communications Technology. This government policy attracted the attention of the multinational technology corporations, namely Apple, Microsoft and Oracle. Then Becta, the government agency for information and communications technology, decreed that all schools should adopt a virtual platform.

Indeed, because of the British early adoption of online learning, MirandaNet Fellowship, a professional

organisation,was chosen by Oracle to lead in their research and development in education from 1999-2002 rather than an American research consultancy. Larry Ellison who was the co-founder, executive chairman and chief technology officer of Oracle Corporation set up a charitable arm, The Oracle Education Foundation, that donated significant funds to philanthropic causes. The first project was an online platform called 'Think.com' for school pupils that was, in fact, an early precursor of Facebook. Ellison invested $14 million dollars of his own money into this enterprise because he believed that it would change teaching and learning forever. The free platform was intended to provide every secondary school child with an email address and a publication opportunity to share their work. The content of the platform was developed by the teachers and the students.

MirandaNet Fellows worked closely with the pilot teachers in England and their pupils for two years. The idea was that teachers could better integrate learning projects into their everyday professional practice using Think.com. This free and protected online environment offered individual web pages for students and teachers, interaction and collaboration tools, and a powerful, shared project space for creating and managing learning projects. The project rationale explained that these easy-to-use tools encourage students at school and around the globe to share and communicate, increase their cross-cultural awareness, and gain technology literacy , alongside other 21st Century, competencies such as creativity and collaboration.

In the guide for teachers that MirandaNet produced, the platform was described as supporting collaborative learning communities. In the handbook we suggested that the online community as a whole (a school for example) may comprise numerous smaller communities with narrower and more specific common interests (such as a subject or a year group.) Members may be students, teachers or education professionals (Dorneret al., 2000).

However, this learning opportunity was ahead of its time and, significantly, was influenced by the American commercial model. For instance, during the first school summer holiday the developers in San Francisco launched a new version, but they had wiped the first year content in version one developed by the teachers and the students without asking. This was not popular and worked against Oracle's aim, which was to attract large international numbers of young learners to their platform and keep them loyal throughout their lives. This approach has, indeed, worked with Facebook, albeit for social networking, rather than for professional learning communities.

MirandaNet Fellows were working on Think.com programmes, to help teachers to understand the principles of online learning and to enthuse them in mentoring their pupils about how to use this new learning environment. But Oracle in America had concerns about safeguarding, as online grooming emerged about adults invading students' space online. After two years Oracle excluded the children's teachers and just employed a few e-mentors who were not known to the students. Understandably the teachers were not keen to integrate this platform into their professional practice when their own access was denied. Indeed, without the teachers motivating and mentoring the students' usage dropped significantly. Then, after the attack on New York of 9/11, the American Oracle branch grew concerned about children contacting each other across the world. This innovative learning application was withdrawn along with an opportunity to understand those from other cultures.

Conclusions

So what has happened with education technologies in schools in the U.K since a change in government in 2010 and an abandonment of a specific education policy on technology?

We acknowledge that not all teachers, as learners, want to collaborate and share knowledge. Teachers might

be time-poor and just want to master current knowledge on the topic they are interested in. But, meanwhile, MirandaNet fellows continue to work closely with other education colleagues in related CoPs (e.g. Naace; Technology, Pedagogy and Education Association; and MESHGuides). We also stand by our key finding that where possible e-learners, at whatever age, should feel part of a learning community in order to achieve effective support and professional learning. In these circumstances teachers have more impact if they take the role of mentors guiding the learners through the online resources and learning tasks that are supplied and also encourage the learners to collaborate and post their own discoveries. Our evidence indicates that joining a professional CoP or establishing a new CoP will assist teachers who have these aims.

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Authors: Dr Sarah Younie, Professor Christina Preston

Dr Younie is a Professor in Education, Innovation and Technology at De Montfort University and is Editor-in-Chief for the Journal of Technology, Pedagogy and Education and sits on the journal's Editorial Board. Professor Younie is a founder member of 'Education Futures Collaboration' (EFC) charity, she is a Trustee and sits on the Strategic Leadership Steering group for EFC. Professor Younie has collaborated with Prof Leask from the beginning to set up MESHGuides and has helped to drive this vision forward, through establishing its structures and processes; she sits on the MESH Chief Editorial Board & is Editor-in-Chief of MESH ICT Editorial Board.

Professor Christina Preston has been at the forefront of education and technology for over 25 years. The MirandaNet Fellowship that she founded in 1992 has become a global thought leader in edtech with over 1,400 members in 80 countries and an outreach of more than 80,000 website visitors a year who read up to 10 screens. At the core of the members' philosophy is the sharing of knowledge and change management based on grassroots evidence. The members work with EdTech companies to research into the impact of technology and learning in classrooms and report on their findings for the global community. Christina has won five international awards for her contribution to education innovation and community of practice development. She is also past chair of the Technology, Pedagogy and Education Association and the editor of the Naace Advancing Education journal.

Blended learning - the obvious pitfalls...

Stuart Abrahams

Edtech a decade ago Image Credits: @bryanmathers CC BY ND

It's certainly been an unusual year, and no one thought we'd be approaching winter with learners often having missed many months in school. Questions about inclusion are now so much more pertinent than they used to be. But schools have found that blended learning raises as many problems as it solves. What exactly is the learning digital divide and how are we going to bridge it?

Certainly, teachers were not expecting to deliver their content online even though schools in England have had learning platforms in place since BECTA decreed 'every school shall have a virtual learning platform as far back as 2005.

There has been minimal emphasis on learning platforms since the demise of BECTA in 2010. But now schools are being told by the DfE and Ofsted to ensure that they have a blended learning solution in place as if there has been no government hiatus in financial support and training in the interim. Indeed, after almost 15 years, most schools are still found wanting in this area. They all have, or had, these facilities but in many cases never really got to grips with them on a school wide basis.

Initially Learning Platforms, Managed Learning Environments (MLEs) or Virtual Learning Environments (VLEs) were designed to deliver Individual learning plans using e-learning to gain teacher traction. When the initial 3-year subscription period ended, schools looked at their usage and budgets and realised they weren't getting used effectively. Many cancelled their subscription. Others moved to 'free' solutions like Moodle, Google and Microsoft. But they weren't free. Schools didn't include the costs of setting up and maintaining these, or the teacher training and ongoing customisation needed. A number of schools still employ dedicated staff committed to maintaining these 'free' services.

Without any government pressure to embrace e-learning, Continuing Professional Development (CPD)– or the lack of it, - has a huge part to play in the successful adoption of a learning platform. We've all heard the adage, 'You won't try to drive a powerful car without first learning to drive'. But this is exactly what some schools do. All too often the Network Manager will comment: "Just have a play"; "It's designed to be logical"; "You use an iPhone or an iPad without training – this is the same". No, it isn't!

There's absolutely no point in paying expensive subscriptions and not paying for Continuing Professional Development (CPD). You may as well throw your money straight in the bin and stop wasting your own and everyone else's time. Just one day's training will pay huge dividends to staff confidence, usage and understanding that every stakeholder will benefit from.

Initiatives like Ending Digital Poverty is all well and good. But so many well-meaning organisations try to help, whether it be in providing recycling projects, or fund raising to provide the necessary technologies, whilst they regularly fail to understand the true requirements of accessing on-line technologies in the school context where money to upgrade systems just does not exist. As a result, in school, we have to deal with aging hardware, cabling, poor WiFi and infrastructure. But more often it's the broadband speeds that act as an even worse constrictor to fast access.

I've experienced the situation in many schools who proudly show their recent procurement of mobile devices like iPads and android tablets, only to realise the effect of suddenly connecting hundreds of devices to ageing wifi or already slow broadband. Then there are the issues of charging the devices, storing them and ensuring security.

Other questions are often not considered until the purchase of devices has been made. For example, if you let your learners take devices home, do they have decent connectivity? Do they have somewhere conducive to learning? Is home quiet, or is there always loads of noise and distractions.

From my experience I would advise senior leaders who are embarking on an e-learning initiative to ask each other the following questions:

- Do we have a properly documented and thought through ICT strategy?

- Do we have existing technologies we are paying for, but not using?

- Have our teachers been trained to use the services we currently subscribe to?

- Do you think we currently meet DfE / Ofsted recommended requirements?

- How will our intended purchase help with the issues we have unearthed?

If your answer is 'No' to any of the above, then you should consider reviewing these and getting some advice to ensure that you can remedy any of the above and help get your school on the way to a successful blended learning approach.

Author: Stuart Abrahams

With 7 years as an elected member of the BESA Executive Council and Treasurer since 2017, Stuart has been at the forefront of the Association's transformation story.

As Managing Director of 2Simple, Stuart was responsible for the considerable growth and teacher engagement of the company. Previously he spent eight years as Head of Schools at Viglen, five years as Sales and Marketing Director at Pearson Education and 10 years as Commercial Director at Groupcall.

Stuart's expertise is in running and growing SME technology businesses and spans many areas including: SaaS; cloud; data systems; GDPR; procurement; parental engagement; education management; and Internet security and connectivity.

He's currently a co-opted Vice Chair of Governors for a large primary school, a trustee of SEED, an eating disorder charity focused on helping young people, and a council member at MirandaNet, a professional research association representing over 1,300 educators.

The big picture: resourcing and training

What kinds of digital skills will pupils need in 2030?

Manchester City Council - High School Digital Audit - John Sibbald

Image Credit: *Rick Miller, CC BY ND*

The need for transferable digital skills

A recent Nesta Report explores the future changes of employment and the impact this will have on the skills that employers demand. Called, The Future of Skills: Employment in 2030, the report highlights the fact that interpersonal skills, cognitive skills and systems skills are likely to be in high demand and that the future workforce will need not only specialist skills but also a broad range of transferable skills to be equipped for the changing world of work. More specifically 'creative, digital, design and engineering occupations have bright outlooks and are strongly complemented by digital technology'.

In this context, in Greater Manchester, there are almost 8,000 digital and creative businesses employing more than 82,300 people and generating E4.1bn of economic growth annually. Therefore, Greater Manchester is already home to the largest cluster of digital and creative industry outside London. Between now and 2025, an additional 2,100 jobs will be created in the creative and digital industry within Manchester specifically (GMCA Digital Strategy 2018-2020).

However, as set out in the 'GM Digital Skills Strategy 2018-2020' strategy and 'Manchester City Council's Digital Skills in the City 2018' paper, the digital industry is currently suffering a major talent shortage where demand for skilled professionals is outstripping supply.

To become a leading digital and highly skilled city, Manchester needs a strong pipeline of highly skilled digital talent. But the rapid pace in technology makes it difficult for schools to adapt and maintain an up to date curriculum. Several factors contribute to young people disengaging from the computing curriculum more broadly after the age of 13. These are: the narrow focus of the computing curriculum; difficulty in attracting teachers with digital specialism and keeping their knowledge up to date: and, lack of awareness by teachers,

parents and carers about the scale and breadth of opportunities within the creative and digital workplace.

Planning to improve digital skills

Despite all the other pressures on schools in the midst of the pandemic, Manchester City Council, with Andy Burnham at the helm as mayor, have been seriously planning to meet this need for digital skills amongst young people who will be looking for jobs in a reduced market. The first step will be an audit of the current situation which will be used to inform the priority actions for the Digital Skills Network Young People Sub-Group. It will also be used to inform the Manchester Digital Strategy and other Manchester City Council Strategies and strategic priorities including the Work and Skills Plan and Education Strategy.

The Digital Skills Network is facilitated and chaired by the Head of Work and Skills and is made up of over 100 digital and education professionals who convene bi-monthly with a broad purpose of sharing good practice and collaborating on activity that tackles Manchester's digital skills challenge. A particular focus of the Network has been to explore how young people can develop the skills needed for a career in the digital workplace.

In December 2018 the Network spent some time reflecting on achievements and identifying priorities for the New Year. An outcome of this was for the Network to develop tasks and organise groups to increase collaborative working, focus action and deliver greater impact in 2019. The young people's exposure to digital skills task and finish group have identified this network as essential to have a greater understanding of what the current digital offer looks like for High Schools across Manchester. Only with knowledge about the current skills picture can Manchester move forward on any action.

Undertaking a skills audit first

Auditing the skills that exist already and the context in which they are taught is the first stage in the Manchester project. With thirty years of experience teaching and leading in North Manchester secondary schools, I have been commissioned with my colleague, Anne Casey, to head up an audit of the current creative and digital 'offer' that High Schools are delivering across the City.

The aim was to capture the voice of students in a relevant sample of schools. The remit started with the scope of the audit, which was agreed by all the parties to include all 37 High Schools located in the city of Manchester, including Special Schools. The focus of the audit was to be Key Stages 3 and 4 and conducted with staff from the school including Senior Leaders.

Secondly the outcomes were agreed. These were:
- Desktop research and stakeholder interviews were to be carried out in advance of field work with schools to ascertain the current position, available through various data sets e.g. numbers of schools offering GCSE Computer Science and stakeholder perceptions of the digital offer in schools.

- A questionnaire would be designed and administered to gather data and information at individual school level.

- Qualitative interviews were to be conducted with school staff, including a Governor and members of the Senior Leadership Team.

- Interviews would be held with a group of students in each school from across Key Stages Three and Four.

- A full, detailed written report of the key findings from audit activities was required, including desktop research, questionnaires, interviews and focus groups.

A summary report was also suggested, designed to be accessible to a wider audience and easily shared using a wide range of platforms.

An analysis of the data was expected to result in a Manchester Digital Development Framework to be applied to support schools in their strategic, digital journey. This scope was intended to cover: digital governance; strategic, digital leadership; the digital curriculum; the CIEAG digital offer; teacher and TA access; and pupil digital entitlement.

A methodology that unites practitioners

The researchers will undertake both desktop research and stakeholder interviews. Days will be allocated to gather baseline data from the MCC data team that can supplement the audit activity in schools. The primary research will be supplemented by existing desktop data e.g. 42% of schools offer Computing Science in Manchester, 9% of pupils taking it (Royal Society). This data collection spread will encourage analysis of the figures to explore the reasons why the take up of Computer Science is low and the offer is patchy.

A questionnaire is to be designed, tested and administered prior to the qualitative Interviews with school staff. The questionnaire covers all lines of enquiry including curriculum 'offer', staffing, budget, software and hardware. Interviews with school staff who have a key role in the delivery of a digital offer and will include the Headteacher, senior leaders responsible for curriculum and careers, computing leads, groups of NQTs/RQTs and Tas. In this way we hope to engage our teachers and leaders as co-researchers in this enterprise. We will also expect to interview students in focus groups to gather their perspective on the topic. The consultation with students will cover a range of abilities across Key Stages 3 and 4.

Which questions need to be asked?

In the original report, The Manchester High School Digital Audit identified three themes:

Digital for Living - what are schools doing to prepare students for using digital skills in their everyday lives at home, work and in their communities?

Digital Working - what are schools doing to support their students in becoming digitally literate to equip them for the world of work?

Digital Specialists - what are schools doing for those learners who are interested in developing specialist skills that they wish to study post-16 and working towards being industry ready?

In preparing to undertake this audit we found that there was no addressing of these themes in the secondary school curriculum, which only offers Computer Science. We, therefore, had to group our questions around these two lines of enquiry:

Digital Skills for Teachers - What are the skills and capacity of school staff to deliver the creative and digital skills. This will include wider support staff including Carers and Technicians?

Digital Access - What hardware and software do schools have access to and what is the percentage of the school budget allocated to this area?

In our Audit we framed the following questions which relate to the actual circumstances In the secondary school context. We hope these questions will be valuable to colleagues engaged in similar studies in their own context.

Questions about digital governance

Do governors understand digital skills are a priority for the city and their schools?

Do governors ask or learn about the impact of investment in digital skills?

How can governors be supported in asking the right questions about technology?

Are governors confident in understanding online safeguarding, GDPR and how digital skills can impact on workload and wellbeing?

Is there a need to train governors?

Questions about strategic, digital leadership

Not all schools have a digital, strategic lead on their leadership teams – how do they lead effectively on a digital strategy?

Has budget been allocated for a refresh cycle and research/innovation?

Do leaders enable a culture of training, research, innovation, change, reflection and sharing in the digital universe?

How are proven digital research projects that accelerate student progress shared across a school?

Are leaders confident that IT skills are delivered to all students at KS4?

Are leaders confident that digital literacy prepares students for life?

How are leaders supporting development of specialist, digital skills in their schools?

Questions about the digital curriculum

Do the digital pathways on offer at KS4 support the aspirations of all students? Does computer science matter?

Are curriculum leaders confident that IT skills are delivered to all students at KS4?

Are leaders confident that digital literacy sessions are mapped to ensure effective delivery throughout the curriculum?

How are curriculum leaders supporting the development of specialist, digital skills in their schools? How are those students supported who are not opting for a digital qualification at KS4?

Questions about the CIEAG digital offer

Does the careers guidance service (CIEAG) offer clear enough information and guidance on current digital pathways at KS4 and beyond for pupils and parents?

Are students aware they can switch back to a digital pathway?

Are sustainable and meaningful links made with digital employers and evident in supporting the curriculum?

Do digital employers engage directly with the curriculum, linking subject content to the world of work?

Do digital skills for life support college applications, financial literacy and wellbeing?

Questions about teacher and teaching assistant access

Do all teachers and teaching assistants (TAs) have easy access to digital resources in the classroom?

Are Continuing Professional Development (CPD) training, sharing and support sessions in digital applications highly valued by staff?

Do all staff engage with action-research projects in the effective application of digital technologies with

pedagogy, leading to improved pupil outcomes?

Are TAs utilised effectively in the classroom in relation to digital learning?

Are TAs involved in the planning and assessment process?

Do digital applications clearly support staff wellbeing and reduce workload?

Questions about student digital entitlement

Is there a digital entitlement statement ensuring all students have access to digital services, including specialist applications for pupils with SEND?

Does the school go above and beyond to ensure equality of access and take-up by girls at G.C.S.E. and BAME students?

Do all students develop their digital literacy skills, preparing them for work and life?

Can students bring their own devices into school to access learning via the network where appropriate? Are mobile phones banned in school?

Do all students have good access to school cloud services in school and at home?

Conclusion

In response to the lockdown in March 2020 the Department for EdTech Demonstrator programme was reconfigured to focus on school remote provision during lockdown with an additional 20 demonstrators coming on board. John and Gill Scott from The Manchester College were successful in securing a demonstrator contract until April 2021, delivering support to schools and colleges in the North West of England.

We will be reporting on our findings soon, but meanwhile the questions have become even more cogent in the context of Covid, because so many schools have had to consider their digital strategy and capacity. Those schools that had not built up their digital footprint before have suffered seriously in the pandemic. Naace members might want to adapt these questions to audit their school situation.

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Image Credit: Keith Byers, CC BY ND

Author: John Sibbald

John has nearly thirty years of experience teaching and leading in North Manchester secondary schools. Ten years were spent working at the North West Manchester City Learning Centre, researching the effective use of new and emerging digital technologies and how these impact on teaching and learning. In April 2010 he joined the team at Manchester Communication Academy in Harpurhey, leading on the development of the new Computing curriculum, digital skills, the ICT strategy and staff effectiveness and performance in the use of technology.

Since leaving teaching in the Spring of 2017 he has been working with the following partners on developing remote learning and digital skills:

- *Tute Education Ltd - creating a set of virtual teacher standards, developing lesson review protocols and improving online teacher effectiveness when delivering synchronous teaching and asynchronous learning.*

- *Greater Manchester Combined Authority - working with schools, colleges and industry on developing and evaluating a digital talent pipeline strategy.*

- *University of Salford and Create Education - evaluating the Morson Engineering Challenge, a 3D printing, additive manufacturing project in nine Salford secondary schools.*

- *The Ideas Foundation - supporting pupils in four secondary schools in creating resources for peers as part of a digital leadership framework. This includes: digital critical literacy; digital resilience; and, digital curatorship.*

- *Manchester City Council High School Audit , working with thirty-six secondary and secondary SEND*

- *schools on evaluating and developing their digital offer - computer science, digital literacy, digital specialist and life skills.*

Online Research Methods for Master Level PGCE trainees

Liz Hidson

The global shift to online learning has also been accompanied by an upsurge of interest in online research methods. Increased access to video calling, as well as greater confidence in the technology means that those interested in research may find it easier to move research into online spaces.
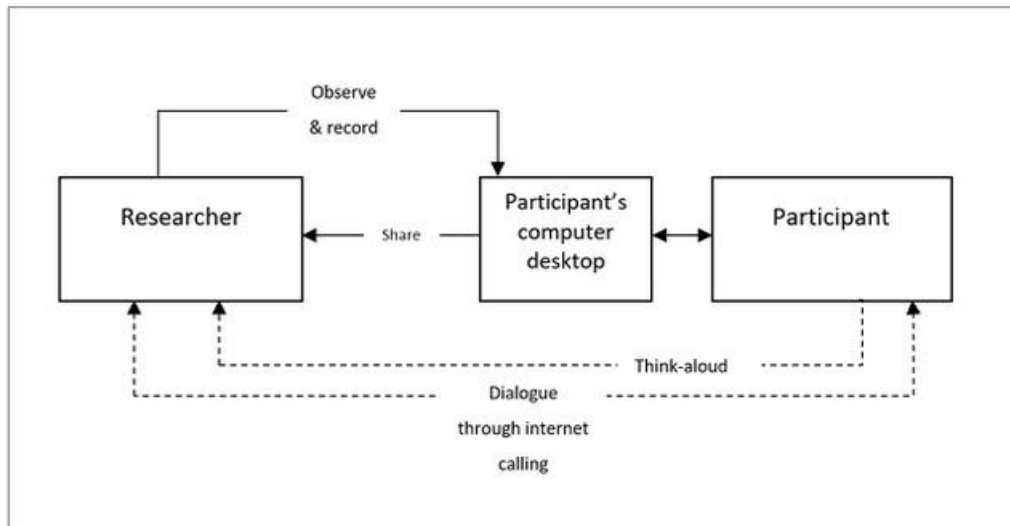
My own research using digital, visual and online research methods was born partly out of necessity and partly out of choice. At the time of my doctoral studies, I wanted to be able to get a spread of teachers involved in my research so that I could gain a variety of perspectives. That meant a wide geographic spread and complicated logistics, so internet calling was a really good choice. Firstly, it meant that I could interview participants all over the UK without having to drive hundreds of miles. Secondly, as my research was focused on teachers planning their lessons, it meant that I could join them in online sessions at a time that suited them, whether they were planning in the evening, on the weekend, or during non-contact time at school. Internet calling and desktop sharing was a relatively unobtrusive method when the teachers were likely to be using computers anyway for their lesson preparation.

From a choice perspective – all my participants were teaching ICT, Computing or Computer Science and so they tended also to be confident users of technology and not in the least bit worried or surprised to consider joining me in a call and sharing their desktops with me. However, I found that there wasn't a great deal of published research embracing these kinds of online research methods at the time, which I found quite surprising. One researcher I encountered had been using Skype in longitudinal research studies and had presented a convincing case for online methods to be seen as a 'methodological frontier' (Weller, 2015). I decided to redress the balance a little by writing up the methodology of this research, so that others would be able to justify their choice of online research method more easily than I was able to at that time, and so the article on video calling and desktop sharing started to take shape.

Under the current restrictions created by the impact of the Covid-19 virus, researchers at all levels of experience are now considering online research methods very seriously, usually out of necessity, being unable to travel or meet face-to-face in a way that would be suitable for research opportunities. Our trainees on programmes of initial teacher education are also Master's level researchers, and they may also be considering online research methods, so I wanted to share three ideas for online research that could be used in our Master's level assignments.

Video observation

For a Master's level assignment based in schools, we find that sitting in on something that is happening in the school is very common. Lesson observations with field notes are often used. However, where teaching has moved online, it is equally possible to 'sit in' by joining an online lesson or session, whether that is happening in school or in a virtual space. Many schools are using a combination of hybrid teaching, where the physical locations of the teachers and the students are subject to change. If it is possible for a trainee to 'sit in' in this way, or to watch a video that may have been recorded of a lesson or session, then this would be an ideal alternative to the traditional lesson observation they might have used.

Video interviews

In the same vein, where once it might have been easy to meet a colleague in the staffroom for an informal unstructured interview, or to arrange an appointment with the school's SENDCo or senior leaders for a semi-structured interview, it is now just as easy to arrange that online. With permission, it is usually possible to record a meeting and of course, we would point our trainees to the ethics involved here – it is never ethical to record a meeting without the participant's permission, and indeed it is courteous to ask permission to make notes. As with all research methods, the issue of ethics should be considered carefully.

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Author: Dr. Elizabeth Hidson

Dr Elizabeth Hidson is a senior lecturer in the International and Independent Distance Learning Team in the Faculty of Education and Society at The University of Sunderland, UK.

Elizabeth has been using online research methods in university-based education research since 2014. As a former teacher of Information Technology, with a career-long involvement in educational technology, this is perhaps unsurprising. In this short piece, she shares some tips about online research methods. Her article "Internet Video Calling and Desktop Sharing (VCDS) as an Emerging Research Method for Exploring Pedagogical Reasoning in Lesson Planning" is due to be published in Volume 5, Issue 1 of The Video Journal of Education and Pedagogy later this year and is available in advance online at https://brill.com/view/journals/vjep/aop/article-10.1163-23644583-00501001/article-10.1163-23644583-00501001.xml

A mixed bag: trainee teachers' stories of their early experiences of teaching online

Alison Hramiak

Looking back through my emails, I'm not sure any of us saw what was coming in terms of the speed and timeliness of lockdown, it just seemed to happen so fast and so fully. Before we knew where we were, face to face teaching in university had ended, all our sessions went onto Zoom©, and our trainees were suddenly teachers themselves! The following article describes some of their experiences as they went from trainee to teacher seemingly overnight.

Sheffield Hallam University. Image Credit: JR James Archive, CC BY NC

In Post 16 teacher training at Sheffield Hallam University, many of our trainees welcomed the chance to continue to teach and support their learners in settings by moving to online teaching learning and assessment. The completeness of lockdown had curtailed their training, and many felt cheated of what should have been the better end of the teacher training year. Having taught their own students all year, it was time to reap the rewards in terms of the success of their students, They wanted to see the results of all their effort and hard work. So for those who could, they jumped at the chance to carry on teaching to the end...

In one of our football academy settings two of our trainees moved their teaching online and worked hard to ensure that their Y12 BTEC L3 Sport learners and Y12 male footballers completed their assignment work before Easter, so that the learners could have a break and be less stressed about their coursework. The trainees used Google Hangout©, as their students were all able to access the resources via Google Classroom ©, while interacting on the Hangout. They found that this worked well for them as a teaching method, and they also used video calls with learners to keep them engaged. As one trainee said,

Not something that would necessarily work with under- or post- graduates I hear you say, but it worked for them.

These trainees also found that an advantage of the online teaching and learning was "[...] getting students to share their work via google docs with me, this allows me to watch and make comments on their live work while they carry on working on it. The students thus far are enjoying it, however Easter is fast approaching and this is reflected in the quality of work we are receiving. Some students are really excelling working at home whereas others require one to one assistance to ensure it gets completed". So, it seemed to be so far so good at the start, but the trainees were 'canny' enough to realise that it might not last.

By way of contrast, in the large FE colleges some of our other trainees also used Google Hangouts©, as well as Google Classroom ©, for formal sessions and for drop-in sessions to continue their work with BTEC L3 and L2 Sport and L3 Sport Science students. For these trainees, they found that their students responded really well to the Google Hangouts©, with some students just

> "popping online to gain their mark and then continuing to work independently (with the materials being posted online for them to access)".

The trainees found that some students preferred being talked through the slides, so that teachers can answer any questions that they may have in relation to the assignment. The "Hangouts" replicated the normal face to face lessons for their students to try and keep things as normal as possible for them. One trainee said:

> "Personally, I am quite enjoying this way of teaching - it allows me to spend more time with students on a 1-2-1 basis in helping them to really unpick the material and the given task."

Not all transitions have been successful, however, and some of our trainees found that they were struggling with the technology, as one media studies trainee said:

> "So far it's a struggle as there's so many people online it crashes or won't load. [...] we only seem to be able to use the chat feature to deliver lessons but at this point it's more just asking how learners are getting on with current projects".

This is something that may have settled down as the weeks went on – I don't think I have spoken to anyone who did not have any technical issues as half the workforce suddenly seemed to move online.

For some trainees, who were teaching the more practical subjects, there were other difficulties too. As one said:

> "We upload some content but without physically being there to teach it it's hard for a practical course with students who are supposed to be out making films, photography projects etc. As for recording who's on and who isn't for those lessons there's no proper way to do it so far and our college systems won't load out of college properly. As for actual numbers online, we get around 20% of what we should have and no way to engage the others as they don't show online. Other than that it's still just, we go online to help with those that do log on when they should do and we go from there ".

So, while the football academy trainees were having success in terms of attendance, this was not the case everywhere. A starting point for sharing good practice in future maybe?

One thing to finish on here is what came back from one trainee when asked about their experience, and it is something that resonates with a lot of people who have been asked to (suddenly) teach online, working at home rather than from it (two very different things as I am sure many have discovered): "I am not enjoying it at all, I don't think it is the same as being in the classroom with them and being able to see and talk to them face to face. I think it is essential for learning, as well as building a relationship with the students". Something I think we can all agree on perhaps?

I am intending to investigate these experiences further, and with a colleague of mine at Hallam, Dave Carr, we are going to conduct some research using focus groups to determine not only what these trainees thought and did as time went on, but also what we can learn from their experiences both in terms of their own teacher training, and in terms of their own teaching – possibly a case where the student becomes the master, as it were.

Author. Dr Alison Hramiak
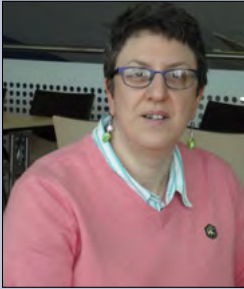
Dr Alison Hramiak is the Post 16 Course Team Leader at Sheffield Hallam University, and teaches on a number of PGCE courses and the MEd. She also teaches on the EdD at Hallam. Her research is focused on impact and pedagogy in learning and teaching, assessment and feedback, and also on cultural adaptations in beginning teachers. She has also undertaken research on the use of technology in teacher training. She has co-authored several books focusing on learning and teaching, and written reviews for a variety of international journals and conferences, and the HEA. Her work is published nationally and internationally, in peer reviewed educational journals. She also writes for the Guardian and THES regularly and is a Fellow of the HEA.

Developing Digital Resources

Keep Taking the Tablets

Ian Rae

Images: Ian Rae

According to the Bible, one of the first deliveries of educational information, was by a certain Moses, descending Mount Sinai with tablets of stone outlining the ten commandments. Of course, in the present day, tablets are still being widely used for educational purposes, but your average child or youth, is not now terribly impressed by tablets containing nothing apart from words. We live in a world where pictures, video and animation has become the norm. Little babies are almost weaned on animated characters. Your average 5 year old, after his or her lifetime of animation, definitely expects to learn from animation and pictures, as much as the new written word - and that is something that is a challenge to us all, in education.

With this in mind, a few years ago, I decided that the songs, which I was writing for children, required to be delivered, not just in sound, but in video and animation. They also needed to be available not only on a website, but also on Youtube, Facebook, Vimeo and similar video platforms. So I decided that I needed to be able to animate the songs - but how do you go about starting to produce animations from scratch, when you don't have any experience in animation? The first attempts were very primitive indeed. I am not an artist, by any means, but I drew some characters, faces and animals and drew them again in slightly different poses. I then scanned the drawings into my PC and, with the aid of some very basic video software, I produced

some very basic animated videos. The results were certainly not sophisticated, but they were enough to amuse little children in the nursery school age group. "Never Stick Your Teeth Back In With Glue" is a prime example of this technique. I also used still photographs, with slight amendments, using the kind of basic photo editing software that is provided free of cost, to achieve animation effects as in "My Little Dog Is Barking Mad". I discovered that even primary school children really liked the videos (possibly because they are so simple, that they think that they could do just as well themselves).

Over the years, I have developed my skills (a little?), and attempted to use my lack of artistic talent as a strength, so much so, that I can now even be found on the web by searching Google for "Badly Drawing Grandpa". But is it possible for someone without any drawing skills to produce acceptable animations, which could be used for teaching lessons to primary school children? In addition, the techniques I was using were quite time consuming and not really producing quality results. I started to investigate the software market, and soon discovered the availability of animation software, which at a reasonable cost, can provide not only higher quality characters than I could ever achieve, but also employs little animation routines. These can deliver the ability to make the characters walk, jump and achieve all the basic human and animal types of motion, while allowing these characters to speak, by automatically synchronising the mouth movements with the voice which was recorded minutes before. The package I use, Reallusion Animator 4, provides a free trial download for Windows and Mac, offers educational discounts and could be used by anyone with basic computer skills, to produce reasonable animations very quickly. For example, my animation of my song "Halloween 2" (a remake of the original one) was completed at the beginning of October, in one evening. In fact, once the basic techniques have been grasped, anyone can start producing animations, which are then converted immediately into the most common video formats within the program. In fact, the technique to produce an animation is so basic, that my eight year old and six year old grandsons, having been shown the process, were able to do it on their own. And of course, to help you learn the animation skills, the animation software company provides, free of charge, dozens upon dozens of tutorials and webinars, which were a godsend to me during the long weeks of lockdown at the beginning of the year.

So, in summary, animation is now a possibility for anyone with Windows or Mac. It is a method of communicating with primary school children in a way they recognise and relate to - for them it is the norm. With recent developments in software, animation is now open to anyone with basic skills and a bit of tenacity. I understand that my songs about improving children's manners, eating healthily, exercising, music theory and Key Stage 1 and 2 topics are watched and, hopefully, enjoyed by children anywhere in the world. So, what have we got to lose - why not give it a try?

Author: Ian Rae

Ian Rae is a London-based Scottish musician, writer and (now) animator, who also teaches music to nursery children. His Youtube channels for children, "Thoughtz4Totz" and "Thoughtz4Kidz" now contain almost 100 videos free to download, and many of his educational resources are available free in his free shop on TES. The videos "Never stick your teeth back in with glue","My Little Dog is Barking Mad", and Halloween 2 can all be found on the Youtube channels below:

The Thoughtz4Totz Youtube channel can be found at

https://www.youtube.com/channel/UCFFpriUgixs7qbL0QvB5UBw

TheThoughtz4Kidz Youtube channel can be found at

https://www.youtube.com/channel/UCIAS87erQTHeZ-30PN2iN1w

Bett21 News

BETT21 will be virtual...

At NAACE, we're proud to offer support and advice to help educators enhance teaching and learning through the use of edtech. The professional organisations have received the following email from the BETT organiser:

After exhaustive conversations with the Bett community, as a consequence of changing government restrictions following the significant escalation of Covid-19 cases in the UK, we have reached the view that we have no option but to cancel Bett 2021.

While we are devastated that we won't be returning to ExCeL in January 2021, we recognise the urgent need to bring the education and technology community together to learn from this past year and to prepare for the future. That's why this January, we are going to bring the things you asked for directly to your screen.

- *Our virtual event won't replace the beloved buzz sound created by all of you at ExCeL London, but by listening to your feedback, your biggest challenges and needs, we're bringing you some of Bett's best bits digitally, including:*

- *Product Showcases – highlighting the very best in EdTech and non-ICT solutions, as voted for by educators*

- *Certified CPD – practical tips and tricks to get more from what you already have with our brand new 'Bett Academy'*

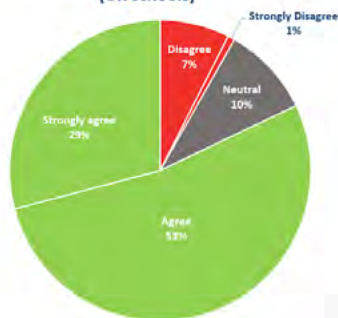- *Trends and insights – the brightest minds in education sharing their biggest learnings*

And much more. Stay tuned for further information on how you can get involved in the coming weeks. We thank you for your continued support and understanding throughout this difficult and uncertain period. We can't wait for the time we can safely bring you all together again in person.
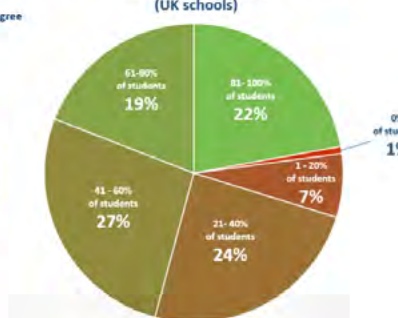
Report on our latest findings about online learning.

Incorporating traditional elements as part of online learning

have learnt new skills in using technology (UK schools)

Strongly Disagree 1%
Disagree 7%
Neutral 10%
Strongly agree 29%
Agree 53%

/hat percentage of your students have engaged in online/home learning? (UK schools)

61-80% of students 19%
81-100% of students 22%
1-20% of students 7%
21-40% of students 24%
41-60% of students 27%

Online learning has presented educators up and down the UK with a range of successes and challenges since the onset of the pandemic. In what seemed like a very short space of time, schools were required to formalise strategies for delivering remote learning.

In the NAACE COVID-19 Education Impact Survey of over 1,000 educators across the UK, 95% agreed,

My mental health has not been affected (UK schools)

Neutral 21%
Agree 24%
Strongly agree 9%
Strongly Disagree 5%
Disagree 41%
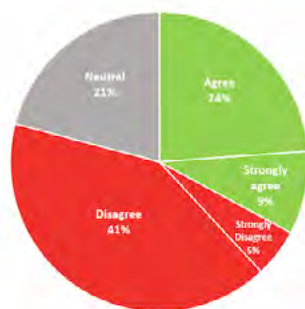
have found it easy to communicate with pupils (UK schools)

Strongly agree
Strongly Disagree 6%
Disagree 25%
Agree
Neutral 20%
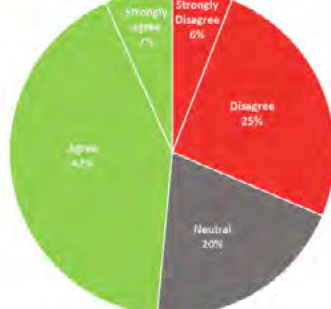
or strongly agreed that technology has been vital to their activities. Though 74% disagreed, or strongly disagreed that they were confident pupils were learning. When asked about engagement in online learning by students, 32% concluded that no more than 40% of their students were engaged.

We've spoken to educators about the challenge of engaging pupils in home learning and found many agree that creating variation in tasks can be helpful in retaining student interest. One of the key strategies for this has been facilitating blended learning at home, mixing traditional and digital tasks to boost engagement. Here are some tips on integrating traditional teaching elements with home learning.

- Let's not turn the page on paper-based learning. Remember written tasks can still be completed through remote learning. Many online learning platforms will allow students to upload written tasks as image files ready to be marked.

- Group work, but virtual. The benefits of group work in classroom environments is widely acknowledged. While this can be more complex to facilitate online, there are ways to do this through collaborative tools or sharing work and resources. It's also worth recognising the value of collaborative work when students may be feeling isolated at home.

- Encouraging personalisation and creativity. When creating online lessons, consider how you can allow students to add their own spin or influence on a piece of work. Whether this is through the inclusion of images or other interactive elements, such as a voiceover, it can help encourage pupils to take more pride in their work.

Videos, blogs and resources

Video

Educators often use video now to share ideas. Here are two different resources. The first is from Bob Harrison, who records the changes in technology since the lockdown.

Post Covid 19

A blended future for Teaching, Learning and Assessment

"An intensified activity in this area will lead educational institutions to realize that they are embedded in a globalised and constantly evolving knowledge society, and that, as a consequence, they will have to redefine their role within society and within the learning process." Joint Research Centre Institute for Prospective Technological Studies
https://www.naace.org.uk/eguides.html

A report from Northern Ireland

Steve Moss, former chair of Naace, has given members access to a report from Ulster University about parents' view on homeschooling in the first lock down.

The report is on the Ulster University web site at:
https://www.ulster.ac.uk/coronavirus/research/impact/understanding-parents-experiences-of-home-schooling-in-northern-ireland

Book Reviews

Sail the 7 C's with Microsoft Education: Stories from Around the World to Transform and Inspire your Classroom; Becky Keene and Kathi Kersznowski

Dave Burgess Consulting Inc. June 2020
Recommended by Gavin Hawkins – NAACE Board of Management
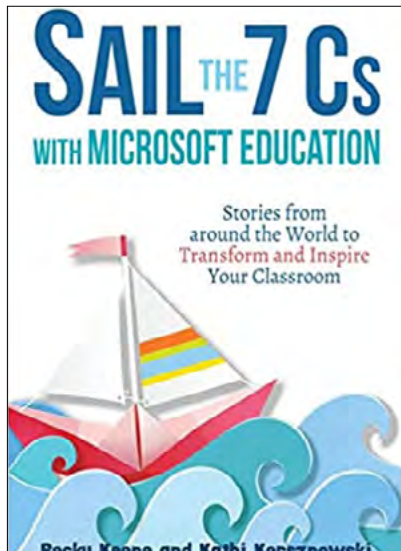
It is difficult to imagine a more timely and pertinent publication to support teachers wrestling with making online and remote learning relevant. As the education world struggles to cope with restrictions on face-to-face learning and teaching, Becky Keene and Kathi Kersnowski have struck a chord, by finding genuinely engaging and impactful activities, designed to showcase the tools available to schools who have access to Microsoft Education tools.

The authors stress the importance they place on creating communities of practice, for teachers to support each other and share activities which improve outcomes for young people, irrespective of their location.

The book is structured around 7 themes (the 7 C's referenced in the title): Community, Collaborators, Communicators, Creators, Critical Thinkers, Computational Thinkers and Changemakers. An approach to which all of us engaged in identifying opportunities for real-life context for EdTech can relate.

The metaphor of "sailing the seven seas" (or 7C's) is maintained throughout the book with reference to "Crew Members", who are experienced educators with stories to tell and activities to share and also a section entitled "Anchor Points" in each chapter, which focus on the key take-aways from each of the themes.

Within the chapters, the authors identify classroom case studies and celebrate the teachers who are implementing the approaches in their classrooms. For example, within the Collaborators chapter we are introduced to activities using OneNote, Flipgrid, Skype and Minecraft from such diverse locations as New Jersey, Labytnangi (Russia), Belgium, Kenya, Wales and the Netherlands. Each of the case studies provides context for the learning, practical advice, links to the schools and educators concerned and QR codes to show the content created or video help files.

Other activities gathered by the authors include recent additions and updates to Microsoft Education, such as Whiteboard and Immersive Reader, which will be welcome to teachers looking to expand the use of Teams once the initial novelty factor has worn off.

Whilst this is clearly a book aimed at Microsoft Education users, the authors also stress that many of the activities can be undertaken using other platforms or tools and it's really the pedagogy at the heart of good learning, with the platform or applications tools to enthuse and engage.

It is reassuring that, at a time of such uncertainty and upheaval, the EdTech community can be relied upon to provide imaginative, engaging, and creative projects which are both impactful and meaningful. And it is equally reassuring that the community members have the opportunity to share their experiences with others through the authors' collation of their stories, achieved via this book.

Trust Me, I'm Lying
Confessions of a professional manipulator

Ryan Holiday

Recommended by Terry Freedman
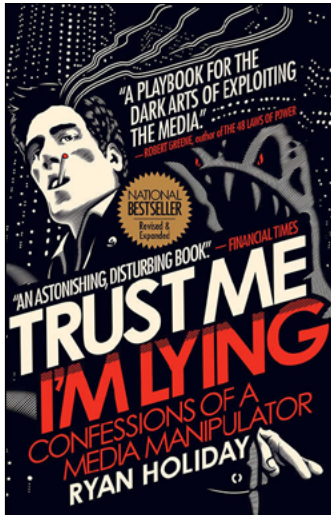
It is rather disconcerting to learn that just because a blog carries the name of a well-known media brand, it doesn't mean that it's held to the same editorial standards as that brand. This is just one of the revelations in this book. Of course, it could be that that caveat applies only to those American examples cited by the author, but it has made me somewhat more wary of brand name blog posts than their mainstream cousins.

TMIL has a similar aim to How to Lie with Statistics. In that book, the author regards himself as the equivalent of a burglar teaching you all the tricks of the trade — not in order to turn you into an accomplished burglar, but to help you better protect yourself against such people.

In TMIL, Holiday demonstrates how easy it is to manipulate the news. The template is: get your news or fake news item onto small blogs first of all. Their owners are desperate for content, and desperate to be first with the news. Consequently, according to Holiday, their editorial standards are not perhaps the highest we might hope for. Those blogs are trawled for content by bigger blogs. Eventually, the item in question might even find its way into mainstream media.

You can help it on its way by creating some controversy around the item. After all, in the media good news is no news, so spicing it up with the hint of a scandal or bad behaviour, or something similar, can be a good move.

What's good about the book is that it lifts the lid off such practices. It's depressing to read in the interviews section that some people used Holiday's first edition as a playbook to enable them to manipulate the news in their favour, but I suppose this demonstrates that they work.

Interestingly, in a recent issue of Scientific American American, an article entitled Why We Trust Lies makes the point that because friends share things on Twitter, Facebook and so on, and people tend to trust their friends and peers, social media in effect transforms disinformation into misinformation. (The difference is that the former is a deliberate attempt to mislead, whereas the latter is much more innocent.) Applying that logic to TMIL, it's clear that media manipulators, to borrow from the book's subtitle, can rely on people on social media to transform their lies — fake news — into a kind of truth.

Holiday doesn't have an answer to the question of what we can do about it. In my opinion, media literacy — and not just digital literacy — should be taught in schools where it isn't already. He might perhaps have also pointed to some ways of evaluating websites and apps, to help that process. (I covered this in depth, and provided details of several useful websites and methods, in the September 2019 issue of Digital Education.)

However, I do think Holiday is being a bit unfair about journalists and their editorial standards (or what he regards as their lack of them). I've no idea what the situation is like in the USA, but certainly in the UK the economics of journalism are such that some journalists are working on 50 or more stories a week (see the slide deck in Read All About It: what does the research REALLY say?). In that situation it would be nothing short of miraculous if nothing slipped through the net. In fact, a talk I give on the subject makes it clear that

news is often misleading even when nobody deliberately sets out to make it so.

Nevertheless, the book offers an interesting insight into how clever and unscrupulous marketeers can take advantage of the facts that (a) bloggers and others tend to be extremely keen to be first with the news, and (b) that websites make money from advertising based on page views. That being the case, publishing something which turns out to be wrong is a positive advantage, because you can then publish a correction — and thereby garner even more page views.

Teachers Vs Tech?
Daisy Christodoulou

Review by Terry Freedman
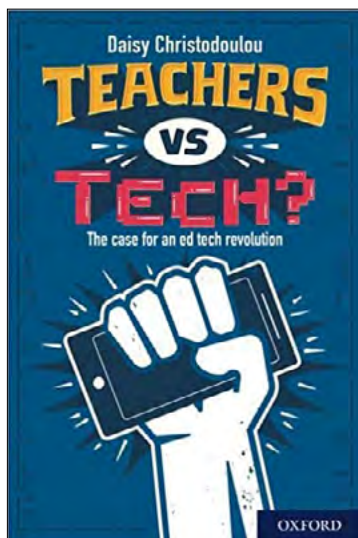
The subtitle of this book is The case for an Ed Tech revolution. Presumably, the revolutionary idea contained in its pages is the one stated explicitly towards the end:

"The more effective approaches seek out what is valuable about teacher expertise and try to copy or even improve on it. The less effective approaches assume it is irrelevant or can be ignored."

Christodoulou takes aim at those who think nobody needs to learn facts, because we can look things up on Google. Her argument is, in essence, how can we evaluate what we find there if we don't have any underlying framework by which to judge it?

Fair enough, though it might have also been worth mentioning that it's pretty hard with Google to find anything useful from pre-internet days, or at least not in comparison to the amount of stuff that exists online. You have to use other kinds of source material and research methods, which would be another reason to not tell kids they need only Google. Other targets are Sugata Mitra's Hole in the Wall experiments, flipped learning, rubrics and project-based learning.

I agree with much of what the author says, especially the importance of teacher expertise. Acknowledging the skills of a teacher means knowing that attempting to address the crisis in recruiting teachers of Computing by using so-called facilitators is not going to work. (If you don't buy that, read Teachers? We don't need no teachers!)

Now, you might think that from all the articles I've written along similar lines I would be welcoming this book with open arms. However, I do have a few misgivings. First, although Christodoulou mentions adaptive learning technology, and assessment using comparative judgements, nothing in the book strikes me as cutting edge as far as technology is concerned. (Adaptive technology has no doubt come a long way since experimentation in the late 1990s, but it's not a new idea. As for comparative judgement, I was experimenting with a similar approach in 1978, though without the benefit of technology to make it scaleable.) I understand that the aim of the book was to look at how people learn, the importance of teacher expertise, and argue for education technology that makes the best use of what we know about both, but I do think it would have been interesting to consider the potential benefits of more recent technologies and approaches.

Secondly, much of the research drawn upon lies in the field of neuroscience, and I have to say that I remain

sceptical about its efficacy. That is in no small part because we keep discovering that the things we thought we knew about the workings of the brain turned out to be working assumptions. I'm afraid I can't give you any examples, except to say that some of the psychology books I studied when I was younger are now regarded as almost akin to fiction. Ditto the biology books I used to find out how the brain works. So I can't help thinking: will studies carried out in a few years' time disprove, or at least call into doubt, a lot of the current revelations in that field?

I'm not even sure some of it means very much either. What, for example, does "overloading working memory" mean in practice, unless you somehow know what the working memory capacity of every pupil in your classroom is? Most teachers most of the time would, I contend, use their expertise and experience as teachers, and a good dollop of common sense. (A good article about this from a philosophical viewpoint is Mel Thompson's Neurodeterminism As An Antidote To Common Sense? I Doubt It!)

Thirdly, as I said earlier, Christodoulou takes aim at project-based learning. She seems to have two objections. One, that if we're not careful, pupils can end up learning the technology rather than the concepts they are supposed to be learning from doing the project. I agree with this objection, but it's nothing new, and doesn't even have anything to do with technology per se. I've seen several examples of where kids had to "do a project" which involved finding books and drawing pictures and putting it all together in a portfolio of some sort. But ask them what they had learnt and you would be met with a blank stare. They were doing the work rather than doing the learning.

In my opinion, that comes down to poor teaching and poor classroom management. I realise that this view is liable to make me deeply unpopular, but if, for example, kids are using PowerPoint to create a presentation for their project, and it consists of every effect under the sun, isn't that because the teacher didn't make it clear that that would elicit no marks, or even negative marks, that the only thing that mattered was the information they found or the solution they came up with?

At one point in the book the author argues that kids and teachers aren't solely to blame for being distracted by technology, because the technology has been designed to make you keep you engaged with it. But when all is said and done, the teacher in the room is, supposedly, the person in charge. By way of analogy, if I run someone over because I was using my car's hands-free mobile phone technology, I don't think I'd get very far in a court of law if I argued that it was the car manufacturer's fault for making it so easy to use. (Much more interesting to me was the finding that being in the same room as someone using technology can be distracting even if you're not doing so yourself. I wasn't aware of that. but it does make sense.)

Two, according to Christodoulou, complex projects are too complex and therefore can overload working memory. Again, doesn't that come down to the teacher, and their approach? Work can be scaffolded. You can use something like an Ausubel advance organiser to introduce the topic or project. You can provide templates for pupils to use to help them plan their work.

So who might benefit from the book? I think two kinds of teacher. One is the technofile who thinks the answer to learning resides purely in technology. The other is perhaps the colleague who wishes to dip their toe in the technology water, but is not really sure what constitutes good education technology. For that person the book will as a caution against forgetting the roles of the learner's brain and the teacher's expertise.

If I were still a head of department in a school I would buy a copy or two to lend to interested colleagues, especially NQTs, despite my criticisms. There's a lot of food for thought here, and I have to say that it's good to read well-researched arguments against approaches like the Hole in the Wall experiment and so on. I

think one of the big problems is that a lot of people who have created amazingly powerful technology think they can use their technological expertise to address the challenges faced by educators. This book makes a pretty good attempt to put such people back in their box! One last thing, to the publishers: if you bring out a second edition, please include an index.
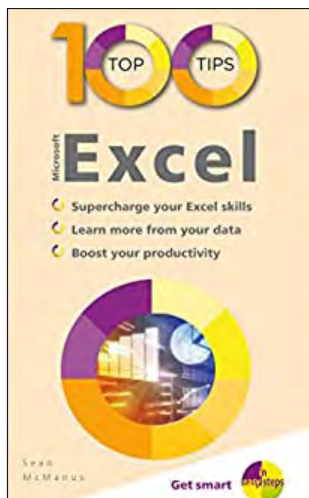
Terry Freedman.

100 Top Tips - Microsoft Excel, By Sean McManus
Reviewed by Terry Freedman

This is a pocket-sized guide to 100 things you can do with Excel, and how to do them. When I say "pocket-sized", I mean it: the book is smaller than A5, and so can easily fit into an inside jacket pocket or a small handbag.

At the end of the book is a handy list of keyboard shortcuts. More about this later.

So what kind of tips are included, and how useful are they? Well, they range from the dead simple, like adjusting column widths, to more complex ones, like pivot tables and data tables.

I'm very familiar with Excel, especially older versions, but I've only recently upgraded to Office 365 and am gradually getting to grips with new (to me) functionality. Therefore I was delighted to discover, within just a few minutes of opening the book, of an option called Flash Fill. I hadn't heard of this before, but before I explain what it is, here's the problem it solves.

Excel - Flash fill,

Suppose you have a list of student names, with first and surnames in one column. What you really want to do, for the purpose of being able to sort the names alphabetically by surname, is separate out each name into two cells.

Obviously, you could cut and paste each surname, one at a time, and paste it into the neighbouring cell. Ideal if you have 20 hours of free time a week and nothing much to do!

I've always used a splitting formula to do this. However, despite having spent years using Visual Basic for Applications and pretty complicated formulae to achieve wonders in Excel, I can never for the life of me remember what the formula is: I always have to look it up. (Usefully, it is one of the "tips" included in the book.)

But Flash Fill enables you to achieve the same thing with a few keystrokes. Once you have typed in the first name of the first full name in the cell to the right, Excel learns what you want to do. Very handy!

Excel - duplicates,

Another challenge you might have is duplicate entries, that is where you have entered a name or another item twice. The mistake is easy to spot if the list is fairly small, but becomes progressively more difficult as the number of rows containing the data exceeds around 10. Enter Conditional Formatting, particularly the option for finding duplicates. As you can see, Excel shows the duplicates in all their lack of glory.

If you're a head of department or subject leader, one of the things you will probably have to do is keep track of spending. When I was a HoD I found using the formula SUMIF() very useful, because that enables you to see how much you're spending on different types of products. SUMIF() is one of the formulae included in the book, as well as another one, SUMIFS().

An Excel spreadsheet can be far more than a souped-up calculator. It's really a modelling tool. Thus, going back to the previous example, as a HoD you might want to test different scenarios:

- What if we get a smaller capitation allowance than last year?

- What if the price of one of our software subscriptions goes up?

- What if my capitation remains the same, but because of my subject's amazing popularity the number of students opting for it rises by 20% ?

Excel - data tables,

You can test for all these kinds of things without having to create multiple spreadsheets. One approach is to use data tables, for example. In the (embarrassingly simple) table above, I've used a data table to see how much money I'd have left if I spent various amounts on software. There is also a section on calculating with dates. This can be surprisingly difficult if you're not sure how dates are represented in Excel, but the author explains this simply and well.

Why might you need to calculate with dates? An obvious use might be working out how long it is before a deadline, like completing your end-of-term reports. This is illustrated in the screenshot below:

Excel - calculating with dates

One of the strengths of "100 Top Tips" is that the more complex formulae are explained in plain language. For instance, combining the INDEX and MATCH functions can be a Herculean feat, but McManus spells out exactly what is going on:

=INDEX(range containing data to return, MATCH(data to search for, range to find it in, type of match).

Clearly, the book has a lot going for it, but it seems to be geared towards Windows rather than Mac users. This is evident in the keyboard shortcuts section, and at least one feature, that of the shortcut to the clipboard on the Home menu. I don't think this is a game changer because the functions and formulae still work in the same way in both versions as far as I can tell.

Also, of course, the book is not geared towards teachers or education. However, it may introduce you to features you were not aware of (such as my experience of Flash Fill), and provide a handy reminder of how to achieve certain results. Therefore I highly recommend this book.

Note: to read more book reviews you can sign up for Terry Freedman's free newsletter, Digital Education. It's now in its 20th year, and for a limited time subscribers will be able to download a free copy of Tips for Teaching Online.

Here's the link: https://www.ictineducation.org/