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THE EDUCATION TECHNOLOGY ASSOCIATION

Advancing Education
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Image credit: Baim Hanif on Unsplash

Right now, where do we stand on Education Technology?

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Editorial

Dr Christina Preston; Visiting Professor of Education Innovation, De Montfort University

Dear Readers,

Naace, who have funded this journal for many years, have decided to invite the Technology, Pedagogy and Education Association (TPEA) to join them in a campaign to develop plans and policies about digital technologies in education based on research. This ensures a wider spread amongst educators in our field from universities, colleges and schools.

So this year, there will be two jointly funded editions in, Spring and Autumn, that will provide informed opinions and research evidence to guide education policy as it develops over the next two years. What has sparked this partnership into life is the potential for change now that elections are due to decide the identity of the next government. In the political turmoil of the last few years and the frequent changes of education ministers. Please fill in these questionnaires and ask your colleagues to do so as well. We will represent your views to policy makers.

You can join the debate if you attend the TPEA/Naace conference in Manchester on 2nd and 3rd July 2024. Sign up soon and make your views public. Sign-up details are below along with articles from our two research teams about what has prompted them to set up their research projects and what they are hoping to discover. The conference will include a strand about this important work.

On page 7, there is a cartoon by Professor Marilyn Leask, who has recently honed her creative skills by offering us a different view on politics. We hope you like her latest effort.

I am pleased to say that this journal has always attracted some of our best writers, and this journal is no exception. Professor Stephen Heppell, well known for his capacity to think at scale as well as his desire to put the learners first, has contributed 'A Call to Arms'. Here he reflects on the early days of computers in schools and reflects on where we are now with edtech, as well as considering the future strategies we need to promote.

John Sibbald, an experienced schools advisor, talks about how we can support teachers and leaders on the AI superhighway, many of whom feel out of their depth. He aims to provide some suggestions based on his experience, not only about what teachers and leaders really need, but also about the learners who are currently being underserved–also Stephen's point.

Digital learning in Northern Ireland's schools is described with justified pride by Professor John Anderson. In a detailed analysis about the achievements of Northern Ireland, he pledges that innovation will continue to be led, not by the technology, but by the instinct of providing for the very best interests and future needs of the learners.

Finally, Terry Freedman offers some practical advice on the characteristics of a good computing scheme of work that he has updated to include AI.

In the last section of this edition, you will find two books that are written by professionals for professionals who belong to our professional organisations. I have known these prolific authors, Professors Marilyn Leask and Irma Eloff, for many years, so when I realised that they were publishing their latest titles in the same month I had no hesitation in asking them to review each others' books. The many years of experience that each has had working in education shines through both publications: Irma's Vignette research method looks at the value of story telling by professionals. Marilyn's book explains the route to gaining a professorship. Get reading!

In addition, we have included a reference to the 9th edition of "Learning to Teach in the Secondary School: A Companion to School Experience" (2023) that many members of Naace and TPEA have contributed to.

I have myself contributed a chapter to Teaching and Learning with New Technologies in the Primary School, published by Routledge and we have given you advanced notice with 20% off.

In these two 2024 editions of the journal, Spring and Autumn, I am being joined by Helen Caldwell and Emma Whewell as assistant editors. We are grateful to Yasemin Oezcelik for her proof oreading skills.

Hoping to see you at the conference on 2nd and 3rd July in Manchester where a key subject is AI. But many more strands are also being developed.

Professor Christina Preston

Please let me know if you have articles or news for the Autumn edition: christina@mirandanet.acuk

Dr Christina Preston,

Christina, a member of Naace for 28 years, joins the Naace Board of Management from an academic background, offering the association a great deal of insight into research about education technology and also effective professional development programmes for teachers. As a retired professor of education innovation, she brings an international slant to Naace, having worked with teachers and researchers around the world.

Naace TPEA Update

Editorial Staff

L to R:
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Emma Whewell
Yasemin Oezcelik

Assistant Editors

Helen Caldwell

Dr Helen Caldwell is an Associate Professor in education. She specialises in educational technology, teacher education and online learning. Helen's research interests include technology-enabled social online learning in teacher education, developing changemakers and the use of immersive technologies for teaching and learning. She has considerable experience of international project work, the most recent of which are two 3-year Erasmus+ projects on the theme of Digital Learning across Boundaries. Helen co-leads the Centre for Active Digital Education at the University of Northampton.

Emma Whewell

Emma is an experienced qualitative researcher in education and child wellbeing. She is an Associate Professor in Teaching and Learning with national and international expertise in project work. Her background is in initial teacher training, physical education, health and wellbeing, identity development and self-efficacy, digital pedagogies and supporting teacher development. She is a member of the All-Party Parliamentary Group for a Fit and Healthy Childhood, a writer for the Children's Alliance and a member of the primary Physical Education Network group.

Proofreader

Yasemin Oezcelik

Yasemin is an education consultant specialising in roles as an online teacher, academic editor, and content writer for the German language. Currently pursuing a part-time MA in Education Practice at De Montfort University Leicester, she aims to add the missing link between theory and practice.
As an online teacher, Yasemin is dedicated to facilitating language learning experiences for students, employing interactive methods to promote learner engagement. In the realm of academic editing, she ensures the clarity and coherence of scholarly texts, aiding students in effectively communicating their ideas. Additionally, as a content writer, she equips students with tips and tricks to enhance their academic texts.

A joint article from NAACE & TPEA research teams explaining their research aims so far

Helen Caldwell and Emma Whewell (TPEA), Gavin Hawkins, Ed Fairfield and David Whyley

If you are reading this journal you have joined TPEA or Naace in order to share opinions and collaborate on professional ways forward in edtech. We greatly value your membership as it gives us all a trusted voice in the policy and practice debate.

With a change of government in view, we want to represent members' views with research backup to validate the arguments. The two research projects have different approaches. Naace is assessing the current picture of edtech in schools, and TPEA is looking, more specifically, at the teaching of the computing curriculum. The joint results will be powerful, especially if we can attract a cohort of at least 100 members for each. We will also welcome the responses of your colleagues. Here are the details about each project currently in progress from the researchers:

Edtech: Where are we now?

As the not-for-profit independent organisation focusing on school improvement through the effective use of educational technology, Naace has made it our mission to find out and use the insights to further the development of best practice across the board. In January 2024, we launched this 12-month research project that engages all UK schools in sharing their experiences of EdTech. Aligned with the six elements of our Naace edtech Review Framework (ERF, a tool that's already helped 14,000 schools map their journey of improvement with EdTech), this study will provide a holistic and fully independent – appraisal of edtech in UK schools.

We are now actively communicating with as many schools as we can to encourage them to take part in the survey, and we could really do with help from members! If you are based in a school or a consultant working with a group of schools, the link to the survey and more details of the project can be found here: www.naace-research-hub.co.uk . The more schools we have responding, then the more accurate the picture we can build!

Our title indicates our attempt to find out what's really happening in the edtech space by exploring these key questions:

- How ready are our schools to make the most of technology?
- Where are we on our roadmap of improvement, and how does this vary?
- What do we need to do to move forwards?

Our research will be broken down into the following elements, which reflect our

EdTech Review Framework:

- Leadership and management
- Teaching and learning with technology
- Assessment of digital capability
- Digital safeguarding
- Professional development
- Resources and technology

Aligned with these six elements of our Naace ERF, the study will provide a holistic and fully independent appraisal of edtech in UK schools, with the results released at Bett 2025 for industry discussion and on-going analysis. Also, in this election year, we are hoping that the findings will inform future government strategy and will be actively seeking representation with the Department for Education to share the findings.

Each month, we shall randomly draw 10 schools who have completed the survey to receive a year's free access to the ERF (worth £100).

Access the survey here: https://www.naace-research-hub.co.uk/research

Is the computing curriculum fit for purpose?

TPEA Computing Survey 2024

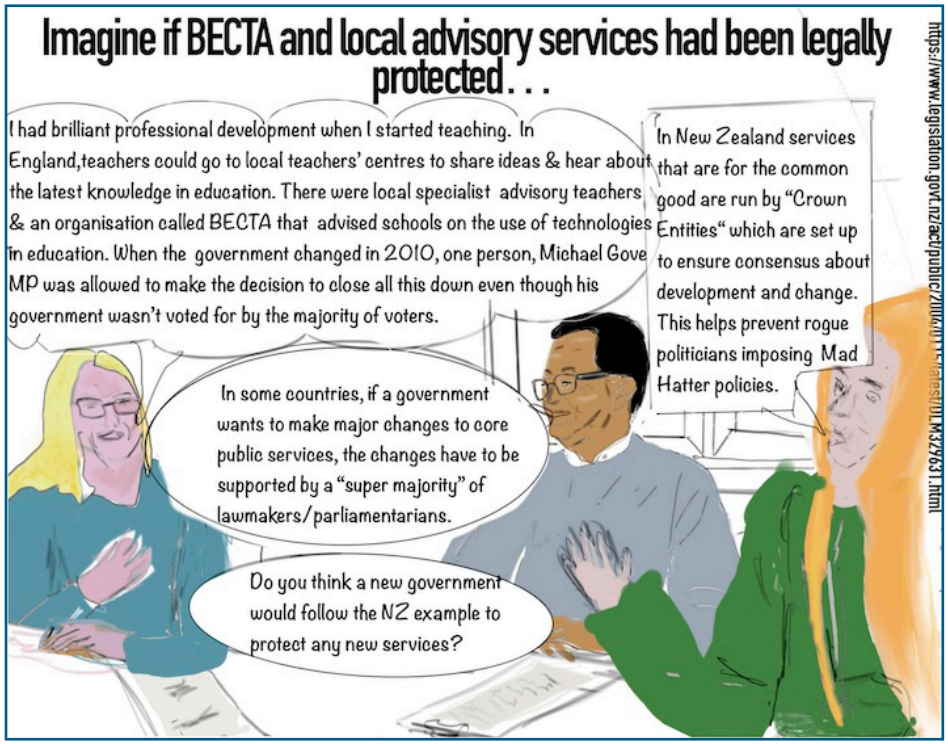
Our aim in this research is to explore the confidence and competence of teachers who deliver the computing curriculum in schools in the UK. We are looking to explore the experiences of computing teachers and understand ways in which computing teachers can be supported to develop their teaching and learning. This survey hopes to identify key factors that the TPEA can action in their plan for CPD, including resources, webinars and conference activities. The outcome will be to produce a set of recommendations and potential resources for computing teachers and schools in the UK.

We would like to hear from anyone who teaches or supports teachers teaching Computing in a primary or secondary school. The survey will take about 10–15 minutes to complete and will help us to understand the opportunities and challenges for Computing teachers. The results of the survey will be anonymised and shared in academic publications via the TPEA and Naace websites: www.tpea.ac.uk and www.naace.co.uk , as well as BETT2025.

You can join the survey here: https://app.onlinesurveys.jisc.ac.uk/s/northampton/computing-curriculum-survey

Researchers

Gavin Hawkins, Ed Fairfield and David Whyley (Naace)
Helen Calwell and Emma Whewell (TPEA)



Articles

A Call to Arms

Professor Stephen Heppell

We are just passing the 40-year anniversaries of an explosion of classroom and home computers: BBC B computer (1981), Apple's Macintosh (1984) computer, Sinclair's Spectrum (1982), RM's indestructible 380z (1977) and more. These heralded an unprecedented exploration of interest in technology as a valuable tool and a focus for learning, both in schools and at home. When Tom Smith and I published our little free BBC booklet "Help your child with computers at home", at about that same time, it went to a massive six reprints before the BBC realised how much it was costing them! Home learning with and about computers went viral! So perhaps it is a good time to reflect on where are we now with edtech, and perhaps consider future strategies too.

The emerging certainties from those brave early research projects can largely be summarised as:

Children took risks with their learning, and whether it was creative writing, programming or control technology, they tried things knowing that they could tweak, undo or revisit. Progress was rapid as a result. New ways of "doing things better" emerged.

Children absolutely loved to communicate and collaborate with each other, using the new conduits offered by clunky 1200/75 modems and flaky connections. When we built *ESW in Essex and Hertfordshire in the early 1980s–using BT's teletext Prestel service piggybacked onto an early electronic mail implementationit was the children who drove the progress in what then grew to become The Times Network for Schools (TTNS). Their learning communities extended way beyond the walls of their schools.

The agency and challenge that technology brought to UK children created practice that led the world. In a very early Nortel-supported video linking project (we even had the Queen connecting!), a group of primary children in Harlow connected to their peers in Canada. It was a rather high-profile event. Thus, in Canada, a small army of technicians and other senior adults were needed to set up and make the connection, only to find themselves chatting to simply a room of Harlow kids. "Erm, where are your teachers?" they enquired nervously. "Oh, we do all this ourselves; it's our project. The teachers are mostly home at this time. We get out the kit and sort it," the kids replied.

Consistently, our innovative (and young) tech industries learned from this explosion of innovation, and education created very considerable economic value by showing the commercial sector how things could be. All the work we did with children using multiple millions of Tesco's money in Tesco Schoolnet 2000–the pre-millennium project was on every carrier bag nationwide–gave Tesco a huge insight into the practice and value of remote communication allowing them to become the UK's biggest online supermarket, a position they retain today.

Ministers of both main parties were hugely supportive because they were learning too. Conservatives Ian Taylor (Industry) and Ken Baker (Education) stood out, and, in the excitement of Blair's "Education, Education, Education", Charles Clarke was exceptional too. When Culture Minister Chris Smith beamed in to a learner-led event, his first words were, "What do I do now?" The kids knew, and they explained gently. The point being that technology in learning then was too new to have an associated political polemic.

So many projects, so much progress, such a clear UK lead. When we connected

23,000 headteachers in Talking Heads, giving them each a laptop, the vehicle that we used to support their social media activity was *Think.com*, which we had developed with Larry Ellison and Oracle's good support. It was world-leading. Interestingly, when Silicon Valley's Facebook finally came along later in 2004, they were sued for copying someone else's social media engine, but they defended themselves by pointing to our Spinalot engine from the 1990s, very much built on the shoulders of our earlier think.com, as clear evidence of much earlier "prior art" (Mark Zuckerberg didn't say "thank you" of course!). Naace, ITTE, BECTA, MirandaNet, Ultralab, Alt-C and many others were watched jealously around the world, but our children led the charge; many went on to find careers in the burgeoning VFX and games industries.

The point of this shameless wallow in history is that this huge lead was squandered and then lost. But the impact had been very considerable. Economic growth at the end of the 80s was around 6%, way above today's dismal figures. As the 2010s approached, speeches on the curriculum from the new Education Secretary, Michael Gove, focused entirely on traditional subjects but said nothing about ICT.

The government scrapped the Rose Review's recommendations for primary schools, which proposed putting ICT at the heart of the curriculum. The Harnessing Technology Fund for schools, designed to get broadband into all schools, had £50m taken away to fund the new Free Schools. Michael Gove (for schools), David Willets (for universities) and Matt Hancock (for industry) did, however, commission our Education Technology Action Group's report with its core recommendation that:

> *"Digital technology can and should bring joy and engagement: a delight in stellar progress, the exhilaration of unexpected challenges, some playfulness, the reaffirmation of a global audience"*

But importantly, with its central caveat that:

> *"Some things will need to move over, to be dropped, to change and to vary to allow all this to happen. We are calling for everyone to play their part in enabling this progress."*

Sadly, although they welcomed our report, all three ministers were reshuffled, and the moment passed.

Now, this is all perhaps sad, but none of it would matter too much if it wasn't for two new things. Firstly, children's patience has finally run out, and they are turning away from school. Before the COVID pandemic in early 2020, local authorities in England estimated some 55,000 children of compulsory school age were educated at home. Our research suggested a much higher number. By autumn 2020, the official numbers jumped by 36% to 75,000. The numbers of children missing half their lessons had tripled in some parts of the country (for example, Newcastle and Gateshead). In 2023, the DfE's own statistics showed that 20% of secondary school pupils in England had persistently absences between September and mid-January. Children are largely adept at technology, absorbed by it, but find it too often absent from the classroom or examination room. Or simply used to "deliver" the curriculum. And anyway, COVID had showed them that they could learn new things in new ways whilst absent from school. Our Golden Generation project revealed just how good children might be when learning elsewhere. The genie is finally out of the bottle.

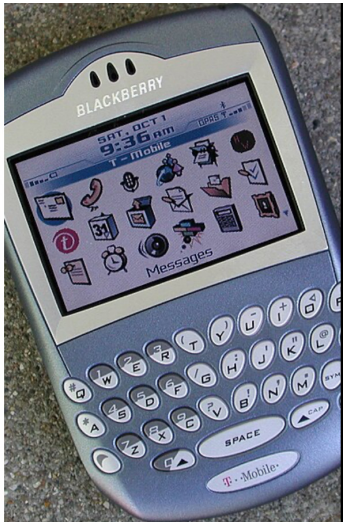
Secondly, in the new economic world post-Brexit, our economy will not flourish by simple doing what we did before. As we have already seen, that won't work. What is now needed will be fresh approaches, new thinking; innovation ahead of prescription.

To regain progress and momentum, we need to engage our children in all this at every level. A reduction in the voting age would help amplify their voices. I remember sitting in India in a very high-powered audience, watching as a young teenage girl harangued their president about how useless her traditional education had been when she left India to find a job, first of all in quantum physics and then in robotics. "Where was the STEM?" she shouted. I think the stunned audience expected an endorsing acquiescence, but her patience had

also clearly run out! Her finger-wagging and unwavering voice were noted. Change there has begun.

In learning, we may very well be at a BlackBerry or iPhone moment. You will recall the BlackBerry which did all the things that business folk thought were key: a proper keyboard, email, messaging, notes, calendars and so on. Things they had always done. But along came Steve Jobs with a new product described in these words:

> *"... three things: a widescreen iPod with touch controls; a revolutionary mobile phone; and a breakthrough Internet communications device. An iPod, a phone, and an Internet communicator. An iPod, a phone ... are you getting it? These are not three separate devices, this is one device, and we are calling it iPhone".*



And if today's schools are the "BlackBerry" in all this, then the subsequent components of New Learning will include lifelong learning, collaborative endeavour, work-based learning, stage (not age) opportunities, global activity and a vibrant eco-system of intermeshing components so that we can all create the personalised learning that we need. Technology democratises. Society has seen that with myriad YouTube channels, with teenage influencers, with whole new communities and Zooming family connectivity. The impact is felt from the bottom up, rarely from the top down.

Throughout its evolution, ICT has produced myriad examples, carefully evidenced and documented, of successful implementations. Many of the reader of this note will harbour and cherish their own examples. Yet somehow this wonderful resource of world-class, indeed world-leading, activity is lost to the current political debate. By way of illustration let me take another example from my own portfolio, Notschool.net: Notschool was dreamt up in 1997, implemented initially in 1998 and ran successfully until 2016. It provided an entirely online community for the many children excluded from school by circumstances or behaviour, harnessing the already growing army of learning professionals who themselves had stepped away from education. At its peak 3,500+ children were annually re-engaged successfully with their learning and with their peers. The Audit Commission lauded it for its best value, and it enjoyed widespread acclaim. With the current bluff and bluster surrounding children's absences (see above), you would think someone would dust off a file and say, "Hang on, we have a tested, effective and affordable solution right here in the archives". Indeed, in 2007, we warned the government of the huge, growing crisis of absent children in a paper circulated to every MP and many others: "Out of Sight, Out of Mind," with some clear, affordable solutions signposted. Re-reading it today, it could have been written in 2024. Things have simply got worse. But current solutions seem to revolve around dragooning the children back with fines, reprimands and registration a plenty. Follow the notschool.net link for a detailed reflection of the project. I doubt that there is now anyone in the Department for Education who has any recollection of the project or indeed of the very many other successes of readers of this note too.

So, this is where you, the audience for this note, are so very, very important. Change is needed, and technology is a key enabler. But change of this

magnitude cannot possibly come from politicians or their civil servants. They simply don't know what they don't know, and show no inclination to find out. Their own pathway to success was through a rigid education system where their teachers said, "I hope there are no surprises on the exam paper," and where everything from their seating plan to their timetable was fixed a year in advance,where collaborative problem solving was almost wholly absent. They are totally unprepared for the unexpected, as we have seen with COVID, AI, Ukraine, and much more. You, on the other hand, have lived in a world full of surprises. The certainty of uncertainty. Technology brings that. You've built a career in a precarious world with so many problems and innovations. "AI, Ukraine and much more. Bring it on," you are thinking, whilst policymakers are thinking "Ban it somehow". But to meet the challenge of building New Learning, the sector needs to be properly brave. You will get just this one chance to choose between a BlackBerry moment or an iPhone one. Together, you have the wit, the experience, the knowledge, the networks and the learners to make the future so very exciting. You can do it incrementally too. Not a revolution, just gentle subversion. For most of your career, you might have felt slightly maverick, crazy even (!), but that is exactly what is needed now. Thus, YOU are exactly what is needed now too. It's your turn, and it is your children's turn also.

What a decade lies ahead!

SPINALOT http://rubble.heppell.net/archive/spinalot/media/spinalot.pdf
ETAG REPORT http://http://etag.report
GOLDEN GENERATION https://heppell.net/golden/default.html
NOTSCHOOL https://notschool.net/
OUT OF SIGHT, OUT OF MIND https://rubble.heppell.net/media_forum/OutOfSight.pdf

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Stephen Heppell

Stephen's ICT career (he is widely credited with being the person who put the C into ICT), began with the UK government's Microelectronics Education Programme (MEP) in the early 80s, after he had been teaching in secondary schools for some years, which he enjoyed enormously.

Stephen founded and ran Ultralab for almost a quarter of a century, building it into one of the most respected research centres in e-learning in the world–at one time, Ultralab was the largest producer of educational CD-ROMs in Europe–before leaving it in 2004 to found his own global and flourishing policy and learning consultancy (heppell.net), which now has an enviable portfolio of international projects all around the world.

An early pioneer of multimedia, heading Apple Computer's Renaissance Project (kickstarting the development and use of CD-ROM in education), Stephen went on to pioneer and be the guiding "father" of early social networking in learning with seminal projects including:

*the pre-internet Teletext and email social networking project *ESW in the 1980s,*

the pioneering nationwide Schools OnLine for the UK Department of Trade and Industry in 1995/6,

Tesco Schoolnet 2000 from 1999 (the then Guinness Book of Record's largest internet learning project in the world).

think.com with Oracle from 1999,

Talking Heads, linking every English headteacher into an online community of practice.

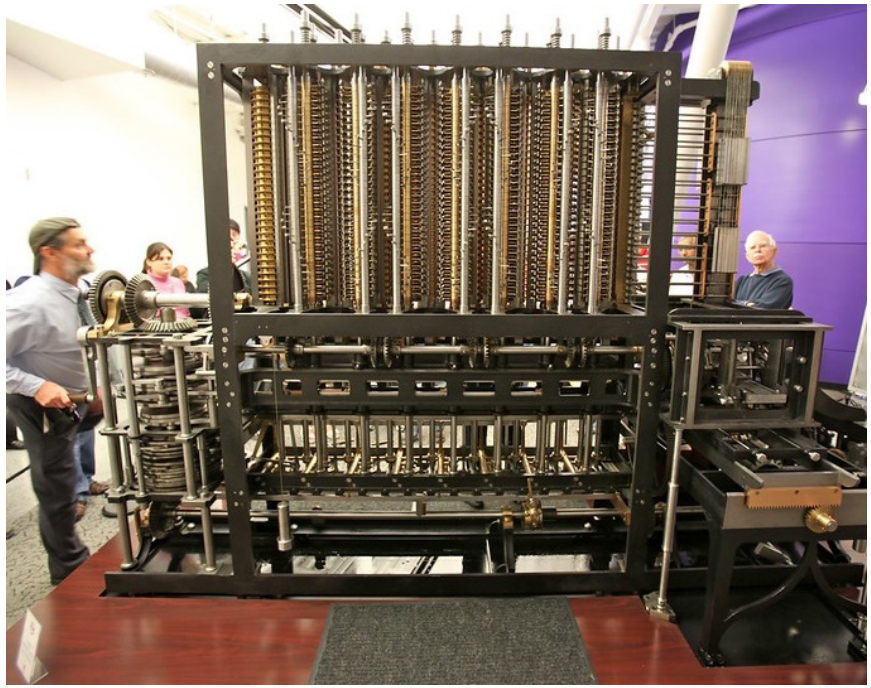
Stephen created in 1997, and guided for ten years notschool.net at the time a uniquely effective project to re-engage children excluded from school by behaviour or circumstances.

In 2003, Stephen led the creation of the remarkable online, work-placed, research-based undergraduate degree ultraversity, variants of which are running in a number of universities today.

Stephen's long track record of supporting children in making, creating and programming with their computers rather than just using them (from Logo and Prolog through HyperCard to Scratch today) has led to a string of constructivist projects including the EU-funded éTui robotic project for 4-year-olds, or Maker4Maker.net with Syrian refugee children in Jordan

In recognition of much of this work, along with just 51 others including Sam Mendes, Damien Hirst, Zaha Hadid, Jarvis Cocker, Harrison Ford, Lauren Bacall and Muhammad Ali, Stephen became an Apple Master in the 1990s. Apple was the initial sponsors of his first chair as a young professor in 1989, in his 30s.

All images, this article sourced from Wikimedia, except profile.



Babbage Difference Engine. Babbage designed this incredibly complicated 5-ton mechanical computer with 8,000 parts in 1822-1849, Image Credit: Steve Jurveston. CC BY

Give the rabbits some shades!

Supporting teachers and leaders on the AI superhighway

John Sibbald

Image credit: Jamila Knowles CC BY, info

Since last summer, there has been much talk about how AI (machine learning, in my book) will revolutionise the education sector. Initial responses from UK Universities were, at best, knee-jerk and more of a holding statement around concerns of plagiarism to give institutions time to get on the front foot with this 'latest technological breakthrough'.

The online posse of edtech celebrities have been making plenty of noise in this space, some of which is very useful, some, well … It's just noise that I struggle to understand.

With that in mind, I decided to come clean and write a short piece on what I have observed and learnt to date. Hopefully this is useful and not just … more noise?!

Machine learning is not new. Fact. I studied neural networks in my second year at the University of Liverpool, back in 1984. The thinking, theory and practice on this topic were well underway then. If you've been using Google Maps to get from one place to another for the past ten years, then that is machine learning; So is buying your train tickets online. I could go on …

The myriad of machine learning applications that have become available are just another wave in the digital revolution that has been taking place since the 1960s. What my computer science degree taught me is that you can't learn every programming language or application out there; you can't worship all the gods, but what you can do is learn the skills required to test and trial the applications you need in your work and life. It's no different with machine learning; you need to find what works for you in your context.

What do teachers and leaders really need?

Here's a thing. I was recently leading two break-out sessions, with over eighty delegates in each session, as part of Flying High Partnership's excellent inclusion conference. What struck me was that there were many teachers and teaching assistants already using machine learning apps such as TeachMateAI to help with planning and assessment. They had purchased their own licences and were using the technology under the radar of leaders in their schools. Nothing wrong with that, but it does show how the cat is out of the bag, or, as a trustee of a small trust I work with in Greater Manchester said, 'Pandora's box is already open–how can leaders support teachers in this new landscape?'

What do young people need?

We now live in a digital world, and digital is part of everything we do, not a separate entity. We all need digital skills to thrive, just like we need literacy, numeracy and oracy skills.

Earlier in this article, I referred to the 'test and trial' skills we need to hone to help us identify what digital skills can support us in our work and life. An

example might be when you move to a new town or city. You need to get about on public transport–plan your route, consult the timetable and buy tickets. (The new Greater Manchester BEE app lets you do this brilliantly!) The point is you learn how to use the app in the moment when you need it. There's no point being taught how to use an application if you don't go on to use it! In addition to essential digital skills, we need to include digital skills that build digital confidence, research, curiosity and tinkering skills.

Digital skills are like rocket fuel when combined with work and life skills, and this includes machine learning, e.g., ChatGTP. I am currently working with Greater Manchester Combined Authority on a digital pilot in Manchester City Council high schools for the MBacc, and we've called this 'digital agency'. It's important to understand what we mean here: not (digital) agency as in 'a business or organisation providing a particular service on behalf of another business, person, or group' but (digital) agency as in 'action or intervention producing a particular effect'.

This digital agency gives young people more agency, as in 'the sense of control that they feel in their lives, their capacity to influence their own thoughts and behaviours, and have faith in their ability to handle a wide range of tasks and situations'. It is vital when considering how we must bridge the digital divide.

I'll report back our findings from the pilot later in the year.

So, I propose that young people need to:

- understand machine learning and AI in the real world;see where this knowledge fits in careers education and industry encounters, including lines of sight to good jobs in all growth sectors including digital;
- practice machine learning skills in real–life contexts across the curriculum.

More on this later in this article, where I propose a machine learning framework.

Policy documents just end up in dusty drawers.

There are many trail blazing teachers I know who are doing magnificent work with machine learning in good schools. Some are supported by leaders using communities of practice, lines of inquiry and peer review to find out what works and what doesn't. Others are just getting on with it.

(It sometimes feels a little bit like the digital champions who stepped forward during the pandemic when I worked with the DfE and Oldham 6th Form College on the Edtech Demonstrator programme.)

There are also practitioners I have worked with who are reticent to get involved for many reasons and are waiting for leaders to do exactly that: lead.

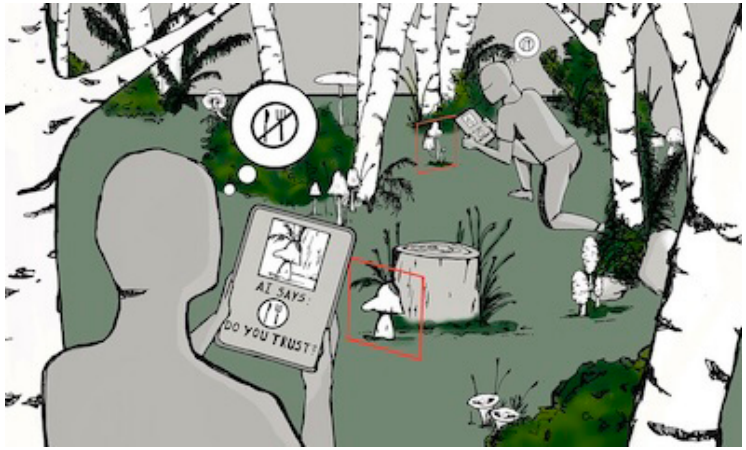


Image credit: Ars Electronica CC BY NC ND,

Teachers need to be directly involved in shaping an emerging machine learning framework for their schools. There isn't an off-the-shelf-policy document you can download. It is the same, reflective process of helping teachers to become better at what they do by applying what we already know out there to their local context. Nothing new here, but the technology can have influence; we just need to find out where and how, whether that be pedagogy, assessment or planning or something bespoke to a particular subject.

What might a machine learning framework look like?

One trust I work with have decided to pivot their digital excellence programme this year to investigate machine learning. Their only primary school is already doing some fantastic work in this area and have developed some sophisticated responses. The secondary schools have much to learn.

The trust digital forum has agreed to develop trust–wide responses to the following lines of inquiry:

- Where does machine learning appear in the curriculum? What do young people need to know, including career education?
- Where does machine learning appear in the digital skills curriculum? How to apply machine learning effectively in their work? What about the dangers of this technology and critical digital literacy?
- How can machine learning support teachers in planning, assessment and workload?
- How can the policy review cycle consider machine learning for all trust and school policies and processes?

Each school is currently working on small projects designed and quality-assured to provide answers to the above questions. Schools will peer review one another's projects and develop a portfolio of best practices, which will be shared with all practitioners. In doing so all teachers will develop confidence in how to apply machine learning to support teaching and learning.

And finally...

The latest educational technology can sometimes feel like an oncoming car, with headlights on full beam, blazing our vision and direction. If we put on the right shades, we can reduce bright light, turn down the loud noise, focus on the right issues, listen to the research evidence and drive confidently and carefully into the digital future.

John Sibbald

John has over thirty year of experience teaching and leading in Manchester secondary schools. John is working with several local and regional authorities, multi-academy trusts on digital strategy and excellence supporting quality teaching. He is a founding member of XR Growth Trails providing virtual, augmented and extended reality solutions to schools in the UK.

John enjoys walking in The Forest of Bowland with his husband and dog Izzy, frequenting the excellent gastro pubs of The Ribble Valley.

Inspiring Digital Learning in Northern Ireland's Schools

Professor John Anderson

50 Years Later …

This year, 2024, the use of computers in Northern Ireland (NI) classrooms dates back fifty years.

In 1974, a National Development Programme in Computer Assisted Learning project based at the (then) New University of Ulster (NUU) in Coleraine developed a mainframe-based Computer Assisted Management Of Learning (CAMOL) programme providing independent study and assessment for learning, in an Advanced Level Chemistry course at Methodist College, Belfast. The individualised feedback (based on algorithms, then called 'truth tables', and printed out on dot-matrix printers in response to answers to diagnostic tests ticked on scanned mark-sense documents) provided direction to the 150 sixth-form students to elements of their course materials where they could revise areas of knowledge. I cut my (baby!) teeth as a researcher working with the science teachers to create the tests and feedback.

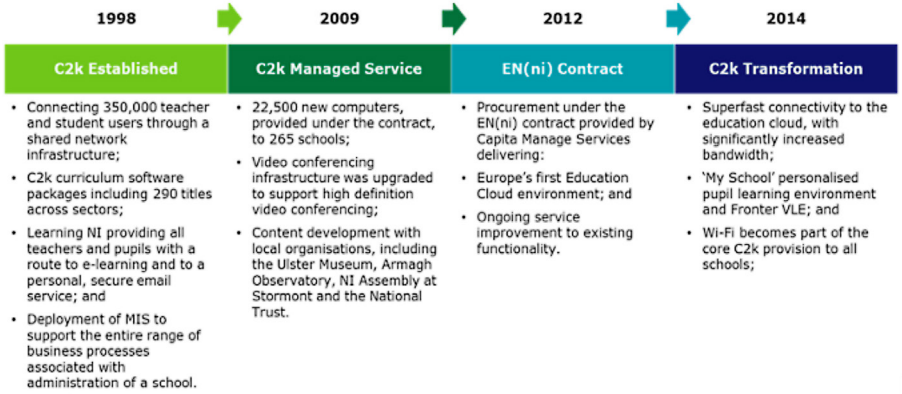
MEP Regional Centre

The NUU's involvement in CAMOL led to it becoming one of the fourteen Microelectronics Education Programme (MEP) Regional Centres led in NI by Harry McMahon, now Professor Emeritus. MEP is, of course, a story in its own right. In common with all other thirteen MEP regions, BBC, RML and even some Sinclair computers started to appear in classrooms, and teachers engaged in INPUT, MICROPRIMER and other teacher education seminars and projects across all the domains of the MEP programme. The innovative relationship between edtech in schools in NI and in the rest of GB has remained reciprocal ever since.

The CLASS Project: Classroom 2000: C2k

The policy decision in 1990 by the NI Department of Education (DENI) to provide computers in school offices through a single centrally managed ICT service (at no cost to school budgets) in order to support the budgetary delegation and the local management of schools, established an equity policy for the provision of digital technology services in schools. The success of the provision led to an extended strategy to provide a similar managed service in all classrooms, through a version of a public-private partnership, with significant advantages of standardisation and economies of scale which sustains to this day, thirty-four years later.

When the CLASS project was extended in 1997 as Classroom 2000 (and then renamed C2k in 2001) to provide classroom systems to support teaching and learning, it created a world-class service, the envy of other jurisdictions and one of the enduring strengths of education in schools here.



While NI's first education technology strategy (1998) focused on the provision of technology and the preparation of teachers, similar in many ways to the Regional Broadband Consortia in GB, the subsequent strategy in 2004, emPowering Schools, focused on changing teachers' practice, particularly in the classroom. The strategy represented an attempt to address the "potential divide existing among school children, their parents and teachers–to bring everyone to

the same level of knowledge so as to be able to use the technology effectively".

Education Information Solutions (EdIS) Programme

Today, the NI Education Authority's (EA) Education Information Solutions (EdIS) Programme is an ambitious portfolio of projects designed to extend increasingly effective, high-quality managed information solutions to facilitate school improvement through to the 2030 decade and beyond. EdIS recently provided 28,000 Surface Pro devices, one to every teacher, and installed in all 1,000 schools the largest Cisco Meraki Wi-Fi installation in Europe. https://www.eani.org.uk/services/education-information-solutions-programme-edis

The objectives of the EdIS Programme are to:

- improve the learning experience;
- improve educational outcomes;
- develop skills for the future;
- support teaching using technology;
- support professional learning;
- increase parental engagement; and
- simplify school administration.

Following a rigorous tender and procurement process, EdIS signed a contract in December 2023 for a new strategic partner, together with a new state-of-the-art school management system (SMS) from Broncom. Development work on a new digital learning environment (DLE) is also underway.

The Innovation Forum

To support evolution in meeting the changing needs of schools, the Innovation Forum, part of the Education Network for Northern Ireland (ENNI) C2k service and comprising actively innovative classroom practitioners and other educators, promotes, through evaluation and information sharing, a culture of innovation in the creative uses of digital technology in classrooms. Research adviser to the Forum is Professor Don Passey of Lancaster University. The evaluations contribute to benefit realisation in the use of digital services and respond to the need for the managed service to continue to evolve to meet changing needs in classrooms.

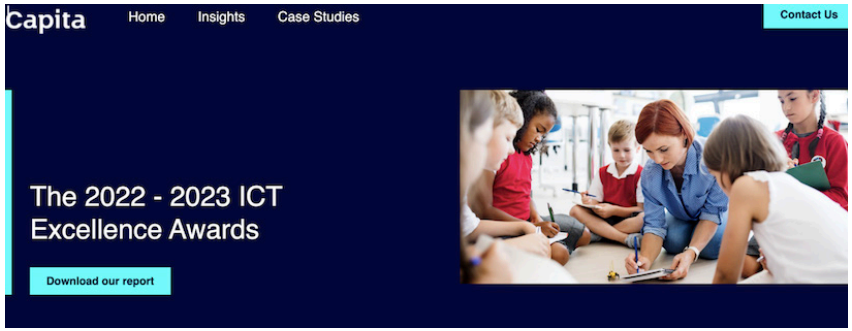
The range of Forum evaluations includes, for example:

- guidance on the effective educational uses of mobile digital devices as a basis for DE Circular 2016/26 to all schools, which is based on some 26 research papers. https://www.education-ni.gov.uk/publications/circular-201626-effective-educational-uses-mobile-digital-devices
- evaluative case studies in the effective use of digital technologies in school improvement;
- school improvement through digital technologies: Using managed service/support in schools in NI with case studies of success
- evaluating the pilot use of the toolset, Learning by Questions; https://www.lbq.org/ https://eprints.lancs.ac.uk/id/eprint/135039/1/Working_paper_LbQ_ENni_Passey.pdf
- evaluating effective uses of the C2k NewsDesk resource in the classroom;
- evaluative case studies and guidance for schools on how best to use digital applications to enhance parental engagement EA (Parental Engagement);
- teacher wellbeing from engaging with educational technologies (6 schools): The Standing Conference on Teacher Education, North and outh, funded research by Ulster, Dublin City and Lancaster Universities in teacher wellbeing when using digital technologies.

https://pure.ulster.ac.uk/ws/portalfiles/portal/113875560/WEB_Teacher_Wellbeing_from_Engaging_with_Educational_Technologies_TWEET_Case_studies_from_the_across_Ireland._Final_Report_v2.0_JAN_2023_16_.pdf

- a think-piece on the role of data intelligence in supporting pupil-centric learning https://www.agendani.com/the-role-of-data-intelligence-in-supporting-pupil-centric-learning/

An ongoing project with Lancaster University and the University of Waikato, New Zealand: Exploring the uses of digital technologies to build connections between families and schools as children transition to school and to maintain further parent partnership.



The ICT Excellence Awards celebrate the inoovative use of technology in transforming teaching and learning, while improving educational outcomes in NI

The ICT Excellence Awards–celebrating effectiveness and success.

The Forum provides judges for the Capita/C2k NI Schools ICT Excellence Awards, established in 2015. The entrants, the highly commended and the winners of the Awards exemplify the highest standards in the creative and effective uses of digital technology in classrooms here.

See https://content.capita.com/ICT_Awards_2022-2023 for the 2021-22 and the 2022–23 video summaries and previous judges' reports and list of winners.

The response from self-nominating schools annual is most impressive and represents the best practice in classrooms here.

The 2024 Awards are underway at the time of publication, and a video of 2022–23 winners is also available at: https://content.capita.com/ICTExcellenceAwards202324

Inspiring Digital Learning

Most recently, and at request of an **Independent Review of Education** Panel, established by the Department of Education under the **New Decade: New Approach** political settlement and chaired by Dr Keir Bloomer, this briefing report synthesises evidence from 44 research, review and reference studies and papers (based on evidence from over 400 school research study visits going back to 2010) into the effective use of digital technologies in Northern Ireland classrooms today and corroborates it with reference to relevant international evidence https://tinyurl.com/2hp5p3dk

The Independent Education Review identified, in its interim report, a range of issues in schooling in Northern which need to be addressed. The final report of the Review Panel was published in December 2023 https://www.independentreviewofeducation.org.uk/ and identifies a range of ways in which digital technology use may contribute to addressing many of challenges facing schools here.

The Inspiring Digital Learning report, which informed the review, aligned research evidence of how digital technologies are being applied in practice to eight of them:

- Early Years
- Disadvantage and underachievement
- Supporting learners, inclusion, and wellbeing
- Curriculum and assessment

- Transitions and progression
- Supporting the education workforce
- Structures and a single system
- Institutional governance

The research summarised by the Innovation Forum provides evidence which affirms what is being achieved day-in and day-out by excellent teachers and learning leaders in NI classroom; these are not assertions. They are not rare examples: effective pedagogy, excellent learning leadership and successful learning, enhanced by digital technologies, are widespread experiences but can sometimes go unacknowledged–except by the learners themselves. The report itself provides all the sources.

Early Years

Using digital technologies well has much to offer play-based learning by enhancing literacy and numeracy development. It supports the engagement of parents and children with the school. Observation, recording and reporting of learning progress are all eased.

Disadvantage and underachievement

Using digital technologies well is associated with educational achievement and attainment, especially by Increasing independence and self-confidence, reducing anxiety and promoting engagement for the learner. Furthermore, behaviour is seen to improve, which also benefits learning and enables pupils to make progress.

Supporting learners, inclusion, and wellbeing

Using digital technologies well helps pupils to overcome barriers to learning and address their own wellbeing. It transforms learning for SEN pupils, promotes their inclusion and increases their independence and self-confidence. It promotes collaborative and creative learning, develops social interaction, and increases parental involvement.

Curriculum and assessment

Using digital technologies well eases assessment for each pupil, enabling monitoring of individual progress and discussion with parents. It is used well to aid differentiation, moving pupils beyond passive learning and helping them to make decisions about learning. It improves self- determination and motivation. Blended learning approaches benefit the more reluctant learners.

Transitions and progression

Using digital technologies well links learning with the real world through enterprise education. Ready access to information about progression enables tailored guidance and target-setting. Personal direction of their learning plays a positive role in helping learners transition from school to tertiary education.

Supporting the education workforce

Teachers' experiences during lockdown positively impacted the teachers' experience of approaches to digital and online learning. The surge in experience gained provided a timely opportunity to drive innovation through TPL. Easing workload impacts positively on teacher wellbeing, and teacher engagement in professional learning is motivated by the responses of the learners.

Structures and a single system

Using digital technologies well enables schools to broaden curriculum access and course choices beyond the classroom. It makes working across schools sustainable, and such blended learning enriches the goals of Shared Education. It can consolidate cross-community friendship, respect and tolerance.

Institutional governance

School governance by boards, principals and senior leaders is promoted digitally by holding online meetings, sharing and co-creating documents, enabling regular communications, seeking feedback and providing data analysis to inform decision-making.

Nevertheless, it is fair to ask: first, how widespread is the effective use of digital

technologies across all NI schools? And, second, how could such excellence become even more commonplace?

The report looks at data relating to the use of C2k services by all schools in a specific month against a sample of schools included in the research studies. The evidence indicates, from the alignment of logins per pupil against high usage and effective practice, that it is highly likely that there are many schools across NI that use digital technologies widely, effectively and innovatively. Future positive prospects for digital technology uptake and effective use are, therefore, strongly suggested. While the full extent of digital technology usage in all schools across NI is not known at this time, what is known is that instances of effective and innovative practice continue to be recognised.

The report further summarises the conditions and characteristics of innovative digital practices which reviewers found to be flourishing; they point to short-term actions which could well be taken in schools wishing to benefit from the role digital technologies play in excellent, future-looking education. They may be read as a guide to what the Independent Education Review Panel may wish to recommend when considering 'next steps' to be taken across the school service to spread such practices even more widely.

More evaluative work is needed to obtain a service-wide picture of usage, which is one reasons why the EdIS Programme has taken corporate membership of Naace so that all 1,200 schools here can be members at no cost to them and can make use of the Self-Review Framework.

Finally, the report looks ahead at what emergent technologies are offering, which are both potentially excitingly innovative and unsettling. The future with digital technologies is likely to present a challenge to teachers and those who support them and may interfere with today's comfort zone of classroom practices. However, the evidence of this report is that teachers, learners and education generally are adapting well to the challenges and opportunities of digital technologies.

Further monitoring, research and development will be needed to ensure that innovation is not led by the technology but by the instinct of providing for the very best interests and future needs of the learners.

John Anderson

Formerly a teacher, lecturer in education, a director in the Microelectronics Education Programme and the Education Technology Strategy Coordinator for Northern Ireland's schools, John Anderson is now Visiting Professor of Education at Ulster University and the Independent Chair of the Northern Ireland Education Network's Innovation Forum, which promotes and evaluates innovative practices in the use of digital technologies in schools.

He provides consultancy overseas and in Northern Ireland for the Education Information Solutions Programme (EdIS), the Department of Education and the Council for Catholic Maintained Schools. He is the non-executive director of the Controlled Schools Support Council.

John retired recently after 35 years in the Education and Training Inspectorate in Northern Ireland, with experience in all school sectors and wider educational settings, including further and higher education, as well in the corporate development of the inspectorate.

12 Characteristics of a Good Computing Scheme of Work

Terry Freedman

What are the attributes of a good scheme of work for Information and Communications Technology (ICT) or computing? Here's the list of characteristics I've always looked for:

It must address the requirements laid down by the district, state or government.

Now, say you teach in England, and you have an absolutely brilliant scheme of work for computing. Only, it doesn't match the national curriculum's programme of study for computing at all. Then perhaps you are going to have to go back to the drawing board on that one.

However, I'm now going to cheat! Because what I would say is, if the scheme of work is brilliant but doesn't seem to match the programme of study, you have a couple of choices:

Take a closer look at the scheme of work alongside the programme of study. Are you absolutely certain there is no correlation? Perhaps concepts are disguised, or in the "wrong" order. But can you still map the scheme of work to the programme of study, at least partially?

If you're in an academy, a free school or a private school, you don't have to follow the national curriculum. However, bear in mind that (a) pupils from these schools will, at some point and in some way, be competing with those who have followed the National Curriculum and (b) those schools are still subject to inspection. However, one of the good things about the computing programme of study is that it is so thin that you fit almost anything into it.

It should be appropriate but challenging.

At the risk of stating the obvious, it's not good enough to have a scheme of work that just addresses students' current needs and abilities. It needs to be able to stretch them and be able to be adapted as students' grasp of the subject grows. Think Bruner's spiral curriculum, and Vygotski's Zone of Proximal Development.

With a bit of imagination almost anything can be tailored to fit the computing PoS. Photo by Terry Freedman

It must be relevant.

In my opinion, one of the best ways of making a scheme of work relevant is to make sure that at least some of it utilizes students' own experiences, interests and environment.

There should be lots of opportunities for developing projects or mini-projects.

You can cover the computing programme of study with a series of well-thought-out projects alongside other forms of teaching and learning. A good scheme of work will suggest how you might develop or localise particular aspects of its content to your circumstances.

There should be scope for branching out.

By this, I mean opportunities for doing things like making videos, podcasts, radio programmes or newspapers. Those kind of things can also be useful for assessment purposes. This has been added as a means of enriching the learning experience of pupils.

There should be "hooks" for other subjects.

For example, an obvious link to computing would be maths. Can you develop a module of work with the maths department or subject leader for maths? A perhaps less obvious link would be with English, but there are forms of poetry that have structures which lend themselves to being viewed through a programmatic lens. Also, work has been done analysing novels. For ICT, especially, there are potential links to geography, while history lends itself to database research and analysis of historical documents. This has been added to enable ICT and computing teachers to think of ways of linking up with teachers of other subjects.

It should have built-in training opportunities

For example, if one of the items is about teaching how to create simple Scratch programmes, there should either be a tutorial right there or at least a link to a YouTube clip or other useful resource.

It should be more than just a checklist

Avoid any scheme of work that tells you hat once you and your students have completed Unit X, you have "done" algorithms, Scratch programming or whatever. Instead, there should be opportunities to revisit concepts and skills at higher and more complex levels as the course goes on.

Ideally, it should involve collaboration

While it's true that a camel is a horse designed by a committee, there's a lot to be said for having several people involved in the creation of a scheme of work.

If you are fortunate enough to have a team to work with in your school, consider having each team member take responsibility for a half-term unit, i.e., one lasting around 6 weeks. If they are in charge of not only content but teaching materials and CPD for the rest of the team and given a free hand over how they choose to address the concepts concerned, you can end up with a very rich and complete scheme of work.

If you don't have a team within your school to work with, or even if you do, try to work with other people, even if you're the expert and they're not. Why? Because they can bring a perspective and an area of expertise that you cannot. See the next point too in relation to this.

There should be lots of examplesa and analogies from different fields

This has been added partly to enable under-confident teachers to feel that they can contribute something to the subject, and partly to maximise the chances of students being interested and developing an understanding.

It should be about more than just "coding"

To be honest, I'm not even convinced that everyone needs to be taught computer programming anyway, but even if you disagree, surely there's more to computing than "coding"? Those old and disparaged ICT topics like design play a part, just to give one example. (If you don't believe me, have a look at a few supermarket websites. Even I find some of them confusing, especially when it comes to checking out.)

It should include modules on AI

If nothing else, AI should feature in units about e-safety and digital literacy. I should suggest that a good resource in this respect is "The Language of Deception" by Justin Hutchins. Click that link to see my review of it.

Note: This article was first published on the ICT & Computing in Education website. For other writing by Terry, please visit his Eclecticism newsletter: https://terryfreedman.substack.com/

Terry Freedman

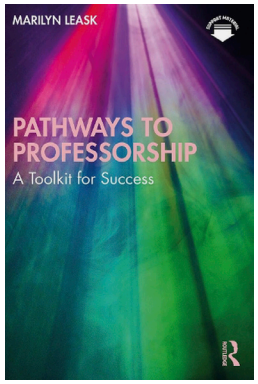
Terry has been active in the educational ICT and computing community since 1987. His website, ICT & Computing in Education, was started in the mid-90s, and his free newsletter, Digital Education, has been going since 2000. These days, he works mainly as a freelance writer, writing for magazines such as Teach Secondary and Schools Week. He also writes about subjects other than education in his Eclecticism newsletter.

Showing ideas for how AI might be used.
Image credit: Rick Payne and team, Better Images of AI, CC-BY 4.0

Book Reviews

"Pathways to Professorship: A Toolkit for Success"

by Marilyn Leask



In the insightful book "Pathways to Professorship," Marilyn Leask and her team of chapter authors embark on a journey to illuminate the intricate pathways toward academic promotion in various scientific fields. Published by Routledge, this book serves as a beacon for aspiring scholars and seasoned educators alike, offering invaluable guidance and wisdom on the ways in which the landscape of academia can be navigated.

Drawing from diverse experiences in global contexts of academia, the book offers insights from the initial steps of embarking on an academic career to the pinnacle of achieving professorial status. The book adeptly maps out the challenges, opportunities, and strategies essential for success. The book delves into various aspects critical for aspiring professors, including research methodologies, publication strategies, academic networking, and the complexities of higher education institutions. Through real-life examples and practical advice, the book demystifies the academic trajectory, empowering readers to chart their own course with confidence and clarity.

However, "Pathways to Professorship" transcends mere instructional guidance. It also shows a profound ethos of mentorship and camaraderie. Leask's genuine commitment to fostering the next generation of scholars shines through, inspiring the reader to embrace the noble pursuit of knowledge creation, scientific enquiry, and academic life.

In a time where academia faces evolving challenges and paradigms, this book serves as a timely and indispensable resource for educators across world regions. Whether you are an early-career researcher aspiring to ascend the academic ranks or a seasoned professional seeking renewed inspiration, "Pathways to Professorship" offers a compelling roadmap for personal and professional growth.

In conclusion, Marilyn Leask's "Pathways to Professorship" is a seminal work that transcends its role as a mere guidebook. This book is a beacon of wisdom and inspiration for future professors. With its blend of practical advice, scholarly insights, and heartfelt mentorship, this book is an indispensable companion for anyone aspiring to excel in the noble pursuit of knowledge.

Irma Eloff

Professor of Educational Psychology, University of Pretoria

Adjunct professor, University of Innsbruck

You can find the book here: https://www.routledge.com/Pathways-to-Professorship-A-Toolkit-for-Success/Leask/p/book/9781032108919

Vignette Research: Research Methods

Evi Agostini, Michael Schratz and Irma Eloff

University of Innsbruck and University of Pretoria

There is considerable controversy in the field of educational research about the validity and reliability of different educational research methods. In some quarters, randomised control trials and quantitative research methods are prioritised, and while these have a role in providing data for certain types of research questions, qualitative data collection methods provide a means to contextualise findings as well as to explore deep meaning, which is lost in quantitative research.

The process of education is about people–developing their minds, providing them with experiences, and changing their lives. Research about the effectiveness and impact of education

therefore needs to capture the impact on individuals. Vignette research, as described in this book, provides a method to get at the heart of an individual's experience of education, and for this reason, I recommend this book to educational researchers. I have myself used vignette research methods to get at the heart of new pedagogical approaches and their impact on individuals and found vignettes provide insights which other forms of data collection and publication miss. If this idea of vignette research is new to you, you may find it helpful to reflect on the use of 'case law' or 'judicial precedents' in the courts. These are a form of vignette and provide the foundation for decisions in the court system.

The "Innsbruck Vignette Research" approach outlined in this book is a phenomenological approach to educational research that attempts to capture and analyse experiences of teaching and learning. Vignette researchers attempt to stay "open" to what presents in the field and are particularly attentive to elements within education settings such as atmosphere, facial and bodily expression, and tone of voice of students and teachers. These observations are collected by researchers in protocols, which then form the basis for writing the vignettes. Vignettes are thick descriptions of the lived experience of researchers and as close as possible to the experience of the participants in the field. Vignettes are best understood as a form of literary non-fiction in which researchers strive to manifest and point to the impossible plurality of the experience by revealing the qualities of a tangible moment perceived by them. To ensure that the researchers communicate the essence of the experience of the participants as completely as possible without adding their own interpretation, the individual genesis of a vignette is documented, then communicatively validated with the participants in the field and through a workshop method within a research team.

Once vignettes have been crafted, they become the primary data for phenomenological analysis, a process referred to as "vignette reading".

In reading a vignette, researchers engage in the experience as readers, holding back from categorizing and explaining in order to uncover, peel off, and add layers of understanding to what is given. Hence, an appropriate interpretation of data in the phenomenological tradition is one which "points to" phenomena of experience rather than "points out" findings.

Vignettes are also used as instruments of professionalisation by making experiences regarding the quality of education, (in-), equalities, and individual wellbeing comprehensible. Hence, they can contribute to a sustainable change in the attitude of (future) teachers and teacher educators.

Marilyn Leask

Visiting Professor of Education, De Montfort University, UK.

Learning to Teach in the Secondary School (2023)

A Companion to School Experience

9th Edition

Many members of Naace and TPEA have been involved in writing chapters for this celebrated series over the years. Professors Sarah Younie, Marilyn Leask and Susan Capel, the editors, were awarded the Best Revised Textbook by Taylor/Francis Book & Digital Product Award in 2019 for the 8th edition.

This updated ninth edition offers advice on all aspects of teaching and learning, including the science of learning, online pedagogies and working with your mentor. There are also expanded units on diversity and inclusion and teacher wellbeing.

The companion website also offers helpful notes and advice;
https://routledgelearning.com/learningtoteach/

Conference News

TPEA's 36th Annual Conference 2024 "Facing the future: Are we ready for change?"

- Are you excited, concerned, or baffled about how AI is impacting education?
- As a general election looms, how can we anticipate and be ready for the next parliament?
- The English computing curriculum is over ten years old; is it time for a review to ensure all learners leave school with the right digital skills to thrive in work and life?
- How can we ensure the latest educational research is applied when making decisions about edtech applications?

Our 36th annual conference will take place at The Friends' Meeting House in Manchester on Tuesday, 2nd, and Wednesday, 3rd July, and will feature keynote speeches, panel discussions, and presentations by renowned experts in the education and research field who will share their thoughts on these questions and more. Our conference is designed to bring together professionals, researchers, teachers, and students who are passionate about edtech and digital skills in the curriculum, providing a platform for exchanging ideas, discussing new developments, and networking with peers. We offer a diverse range of sessions and activities, from workshops and training sessions to thought-provoking keynotes and interactive panel discussions; there will be something for everyone! If you would like to know more about what to expect at the conference, take a look at our 2023 Conference Highlights Booklet.

Call for Papers

We are now accepting proposals for research and practice presentations, panel debates, posters, workshops, or any other engaging form of conference presentation.

To submit your ideas, please complete our Call for Papers form:

https://tpea.ac.uk/2024conference/

Notes about Naace and TPEA

Collaboration is important to maintaining a role in policy and practice negotiations. If you are not already a member of these two organisations, you might like to join and encourage others to do so. There are many options, including free membership.

The National Association for Education Technology (Naace)

Naace is a community of teachers, school leaders, advisors, consultants, and commercial partners working across all areas of UK education who share a vision for the developing role of technology in education.

As a professional association, we support schools to embed the use of technology by collating the latest research in our Advancing Education Journal, gathering evidence of good practice from schools that have been awarded NaaceMark, and providing access to our EdTech Review Framework to support schools in their edtech journey.

We undertake independent research on behalf of our members into the state of education technology across the sector. The results of which reveal a detailed picture of where we are now with edtech in the UK, the challenges for schools, and the approaches that can be taken to address those challenges.

The Technology, Pedagogy and Education Association (TPEA)

TPEA is a membership association that informs policy and practice in education technology. Our unique contribution to this field comes from our members' research and expertise in teaching, initial teacher education, and continuing professional development. (CPD)

We are a UK registered charity that aims to advance education for the public benefit by:

- promoting research and effective practice in the use of digital technologies, particularly, but without limitation, in schools, and
- supporting initial and continuing teacher professional development, in particular in the field of the effective use of educational technologies.

Membership of TPEA is open to anyone who supports these aims.

What we do

We view education technology broadly, and our work includes:

- the pedagogical application of digital technology by all teachers in all curriculum areas;
- the development of the teaching of computing and digital capability, including the strands of computer science, information technology, and digital/media literacy; and
- the effective use of digital technology in initial teacher education, (CPD) programmes, and research.

We do this through supporting our members with an inclusive and supportive community and opportunities to share research and practice. Working with

Taylor Francis, we publish the internationally recognised peer-reviewed academic journal "Technology Pedagogy and Education". We also work closely with a number of technology companies undertaking qualitative and quantitative research for evaluation and development.

We support large and small-scale research projects and advocate the use of practice-based research as a method of professional development. Our members' work is published internationally and disseminated through our blogs, forums, and conferences.

TPEA is founded on collaboration, and we work closely with a wide range of partners, including the Council for Subject Association, MESH, the Chartered College of Teachers, Naace, Computing at School, and many more. The MirandaNet Fellowship members have transferred to TPEA now that their website has been archived.

Our history

Our association was founded in 1986 as the Association for Information Technology in Teacher Education (ITTE) to support the use of technology in initial teacher education and professional development. In 2018, it was decided to adopt the name Technology, Pedagogy and Education Association (TPEA) in order to align the association more closely with ITTE's well established international journal of the same name. TPEA gained charity status as a charitable incorporated organisation in 2020.

Our governance

Our charity is governed by Trustees in accordance with our constitution. Please see the Charity Information page for more information.

The day-to-day management of the association is delegated to an Executive Committee led by our Chair. Please see the Who We Are page for more information. Members of the association can stand for election to the committee at our annual general meeting.

Recent activities

Last year's TPEA conference "Educating and Empowering All Our Digital Citizens" at Bedford was a great success. It was an exciting and informative gathering, featuring keynote speeches, panel discussions, and presentations by renowned experts in the education and research field. But if you missed it, have a look at our Conference Highlights Booklet: https://indd.adobe.com/view/af4a1a45-ce37-412d-918a-08c133eb1b05

As you will know from the article above, our 2024 conference will be held in Manchester, and we hope you will join us (find out more and book your tickets at https://tpea.ac.uk/2024conference/

We continue to publish our internationally recognised, peer-reviewed journal "Technology, Pedagogy and Education" and were pleased to see that we have now achieved a journal 'Impact Factor' of 4.9, making TPE 27th out of 269 international Education and Educational Research journals. It is a truly international journal, with over 70% of article downloads from countries outside Europe. This is due to the very high standard of articles published; our acceptance rate for articles is just 12%.

We also continue to offer TPEA Research and Development Grants – We have recently awarded a grant to Karen Blackmore to support her project "Enabling Dialogue for Teachers to Explore Their Agency Through the Use of Digital Resources" and are keen to hear from others who have projects in the area of technology and education that we could support. Find out more on our website at: https://tpea.ac.uk/funding-opportunities/ --

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