



Advancing Education.  
The Naace Journal.  
Summer, 2022

ISBN: 978-1-7397517-2-2

THE EDUCATION TECHNOLOGY ASSOCIATION

---



Image Credit:

---

## The Demise of the Book is Imminent?

## A letter from the chair of Naace

Dear Members,

As Chair of Naace, one of the great pleasures is being able to attend events on behalf of the organisation. One such event was the recent 64th 2022 World Assembly of the International Council on Education for Teaching held at Bath Spa University in June. The event was organised by Christina Preston (Naace Board Member and Editor of this journal) and colleagues from research institutions. The opportunity to meet with people face-to-face, to discuss a range of issues pertinent to education was hugely beneficial, particularly the sessions relating to education technology which myself and Nadya French (Naace Board Member) attended and contributed to.

As Christina has stated in her Editorial, a full report on this conference will be provided in the Autumn edition, however it would be completely remiss of me if I didn't make particular reference to Sarah Younie's presentation and workshop on MESHGuides, a concept that was completely new to me, I'm embarrassed to say.

For those of you, like me, that aren't conversant with MESHGuides, the concept of MESHGuides have their origin within the medical profession where knowledge relating to particular conditions has been aggregated into a single webpage of information with links to research and support materials, which is updated regularly to ensure practitioners have the latest research and evidence to hand.

It is clear that MESHGuides relevant to education, can have a significant impact on the profession, ensuring that teachers and senior leaders in schools, who often don't have the time and access to research papers and academic journals, could access MESH Guides on a range of topics and contribute their own action research to the body of knowledge.

A link to the current MESHGuides is [here](#). Even a brief look at the site will provide practitioners with valuable evidence which can be implemented within their classrooms. However, I would strongly recommend that colleagues look in detail at the current MESHGuides and suggest other topics for inclusion. I'm sure that Christina and her colleagues will be more than happy to discuss with you opportunities for contributing to this body of work.

In addition to the 2022 World Assembly of the International Council on Education for Teaching, I also had the pleasure of chairing a webinar panel titled Futureproof EdTech Strategies: From continuity to resilience and robustness.

The panel included Sarah Morgan (Naace Board Member), Jose Martinez Vicente (El Limonar International School - Villamartín, Spain) and Wolfgang Soeldner, (International School of Geneva). The webinar was watched by colleagues in many countries who shared their experiences of learning during the pandemic and how the gains that have been made as a result can be sustained and built-upon as schools and establishments consider how they may change to take advantage of those gains.



Whilst many of the discussions were familiar to us (equity of access to devices, connectivity, high quality online resources, etc.) a theme that was increasingly evident, was the desire by practitioners to have access to reliable and relevant research. Clearly journals such as this and the MESHGuides I referred to earlier, have a significant role to play in providing teachers and educators with thought-provoking and challenging evidence that should be part of the diet of any practitioner.

As ever, I thank the contributors to the journal and Christina for her excellent editorial skills, and encourage members to contact us with themes and ideas they may have for future articles.

*Gavin Hawkins*

*Chair Naace Board of Management*

---

***Hanefa Osman, Proof Editor***



*Hanefa Osman studied Education Studies at undergraduate level at De Montfort University, Leicester. She then went on to complete Education Practice at Masters level. Whilst working as a teaching assistant at a school during the COVID-19 pandemic, Hanefa realised the importance of technology in education and hopes to use her knowledge on digital technologies to make a difference.*

## Contents

<b>A letter from the chair of Naace</b>		<b>Back to the Future : Research review</b>	30
<b>Editorial</b>	4	<i>Harvey Mellar, Maria Kambouri</i>	
<b>IT and its impact on Pedagogy</b>	7	<b>App Review: DALL·E-2 - AI image creation</b>	32
<i>Dr Chris Yapp</i>		<i>Theo Kuechel</i>	
<b>In 2022, what is social media?</b>	10		
<i>Ian Coombes, Dr John Wollard</i>			
<b>Three story-telling projects supporting Computing in the National Curriculum</b>	13		
<i>Lawrence Williams:</i>			
<b>Rhizomatic Learning Snapshot</b>	16		
<i>Mike Blamires</i>			
<b>Conference Report</b>	24		
<i>The 2022 World Assembly of the International Council on Education for Teaching , James Noble-Rogers</i>			
<b>Publication Reviews</b>	26		
<i>Story Machines: Will the robot who can mimic Shakespeare make authors obsolete? Mike Sharples and Rafael Pérez y Pérez</i>			

## Editorial

### The demise of the book is imminent?

A theme has emerged in the collation and creation of this journal edition that has reminded me of a debate titled The demise of the book is imminent? at Sussex University in the early 1990s. I was paired with Douglas Adams to support the motion. We lost roundly to the publishers. “Thank goodness”, said the late, great Douglas, “my new book comes out next week”. Apple retained Douglas because of the power of his imagination in creating the future of technology. In the Hitchhiker’s Guide to the Galaxy he describes a green screen laptop that was only a twinkle in Apple’s Eye at the time. Such a sad loss so young.

The first three articles in this edition do not challenge the A4 format of this journal although they do challenge our thinking about how technology is changing traditions. First up is Chris Yapp who writes a combative piece about IT and its impact on Pedagogy. My first thought was ‘IT’? ICT, EdTech? Is there a new term? Anyway what Chris is talking about is the way in which technology gives us an opportunity to rethink what has been seen as a disability. He offers several examples from his experience stretching back to the 1990s including examples of overcoming his own challenges. “In the 1990s, I was introduced to the world of Dyslexia from a book by Tom West, In the Mind’s Eye. For some people Dyslexia is a special need, yet others see it as a gift. That was true both of the pre-digital age and the

current era. So, I became a convert to the notion of ‘visual giftedness.’” His key question is how much are we constrained in spotting the genius of those who are not experts in the bookish skills of reading and writing? I call it the Tyranny of the Readers and Writers as I too have my challenges in spelling and in spotting grammatical errors. But I do know how to choose a good proofreader.

Ian Coombes, poses the question “In 2022, what is social media?” In his doctoral research he found that the answer is not as obvious as we might think. His argument is that teachers need to appreciate that pupils hold divergent internal definitions of social media if they are seeking to teach pupils about e-safety.

Lawrence Williams begins with a statement that seems counter to contemporary liberal arguments: “After many years of teaching in the classroom, I believe that “creativity” is developed by pupils who have been given a very clear, even strict, set of guidelines and structures within which to work. It may seem paradoxical to argue this, but the more restricted the pupils’ parameters, the wider the range of creative responses that is developed. The setting of these rigid parameters has the additional, positive effect of focussing the students’ work on the learning outcomes needed by teachers in order to assess their work against National Curriculum criteria.” I was persuaded by his three examples. Will you be?

### Professor Christina Preston

*Dr Christina Preston, 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 as she has worked with teachers and researchers in Argentina, Brazil, Chile, China, the Czech Republic, India, Mexico, Pakistan, Saudi Arabia, South Africa and Syria. This led her to create a professional organisation, the MirandaNet Fellowship, which seeks to explore the integration between edtech learning and practice. Christina has plenty of experience in providing advice – both academic and practical – to curious education practitioners. As the Editor of Naace’s Advancing Education Journal, Christina plays a pivotal role for the association in organising, collecting and reviewing relevant academic material which will benefit the association’s membership.*

### **Abandoning the A4, black and white book format**

The next two articles derive from face to face meetings at the 64th 2022 World Assembly of the International Council on Education for Teaching which was held at Bath Spa University from 21st to 23rd June 2022. Professor Sarah Younie, who organised this opportunity as Vice Chair of ICET offered the four UK edtech professional organisations, Naace, TPEA, MirandaNet and MESHGuides, the opportunity to take advantage of this event to run workshops and two unconferences. Members of the four organisations debated their experience of different approaches to online learning and explored together different ways of collaborating online. The outcomes from this debate are being documented in a chapter of an academic book on Rhizomatic Learning, which is now the international umbrella term for this kind of digital collaboration. The metaphor is from the complicated roots of a rhizome. The book is scheduled for the end of the year. However, the guiding principle of MESHGuides is that teachers need information about research findings in a format that is easy to assimilate and understand. We cannot expect most teachers to plough through academic papers to find what they need: they are too busy. The MESHGuide that was another outcome from this unconference as too big for this publication, but Mike Blamires has created a MESHGuides Snapshot that you will find below. Then we had a radically different approach from Hanefa Osman who, thanks to Inspiration software, has produced several concept maps based on the ideas suggested in the unconference. But the maps are large and in landscape format.

In considering how to present the concept map and the Snapshot, Theo Keuchel, our designer, and myself began to wish that the demise of the book was imminent and perhaps we should help this along by abandoning the A4 format of this journal? So we have changed to a landscape format. We'd like to know what you think.

The members of Naace, TPEA and MESHGuide and MirandaNet also held an

unconference about edtech in our current UK climate. For those of us who were there it was an important moment to take stock. A key point was sharing our reflections on the state of edtech CPD for teachers now that we have had 9 Secretaries of Education in 10 years - one of them an ex- fireplace salesman. I'll be reporting on this session in the Autumn edition of Advancing Education.

Meanwhile the next report summarises two keynotes from the ICET conference from Ghana and from Australia where their governments are working with teachers and professional bodies to improve their systems, especially their professional development programmes. In the Autumn edition I will report on our professional views about UK edtech professional development which was the subject of one of our unconferences. We are again putting together a chapter of a book as well as an academic paper, a concept map and a MESHGuide.

In terms of the conference funding I am grateful to Zoom, The Wisdom Partnership, Inspiration Concept Maps and the Improvising School who responded to my request for sponsorship of the communications technology and to help teachers and researchers who were struggling financially as well as for the drinks at the Welcome Reception. In tough times these gestures were much appreciated.

### **How important are books now?**

Two reviews of publications follow. The first is another angle on my questions about the value of the traditional book. In the Story Machines, Mike Sharples and Rafael Pérez y Pérez, ask the question, Will the robot who can mimic Shakespeare make authors obsolete? You will be intrigued and horrified as the potential sophistication of these machines is revealed.

Carrying on my theme about the demise of the book, these days Sally McKeown, reviews the TeachingTimes which is totally digital as is the Times Education Supplement. Sally explores the value of subscribing to the Teaching Times as well as writing for this publication. Howard Sharron, the founder, started with

Questions Publishing in 1986. “I noticed that the UK did not have any serious professional journals for education,” he said. “There were academic journals that covered university research and there were newspapers but there was nothing producing serious in-depth articles that brought theory and practice together.”

The features look in-depth at a specific topic. New articles go up every week and then the best articles are curated and sent out as digital magazines. Sally also explains that the format has had to change as many of our subscribers read TeachingTimes on their phone. “Gone are lengthy sentences and paragraphs and instead there are six magazine areas: Leadership, Professional Development, Digital Learning, Inclusion, Learning Spaces and Creative Teaching and Learning. There are also buttons for key topic areas such as blogs from commentators, climate curriculum and governance”. It is clear that teachers’ technical expertise is making new demands on publishers.

Finally, Dr Harvey Mellor and his colleague, Maria Kambouri, have responded to the request to pinpoint valuable edtech research that is still relevant today. Harvey was a key founder of the MirandaNet Fellowship in 1992 at the Institute of Education in London. Now he is one of the colleagues who has joined my Back to the Future initiative helping me to ensure that the resources legacy from the 1,500 members of MirandaNet are transferred in a useful form to the TPEA website. Please get in touch if you are interested in this venture. The next edition will be reporting on progress. But indeed if we all had to find and store the original paper versions of this important research the project would not be possible.

So I feel that this edition of Advancing Education indicates that in many ways technology is changing the way we teach, learn and publish our findings. Even how we develop new ideas because now more people can be involved in the collaborative production of ideas online. Indeed the traditional book is being replaced when this allows a greater range of communication of ideas and the digital publication of them than has been possible in the past.

But books have their role too, of course. As the publishers said when they won that early debate: nothing beats the smell of books, the weight of them in your hand and the pleasure of curling up in an armchair by the fire to be entranced by the narrative of other thoughts and ideas.

*Dr Christina Preston*

*Visiting Professor of Education Innovation, De Montfort University*

## IT and its impact on Pedagogy

Dr Chris Yapp

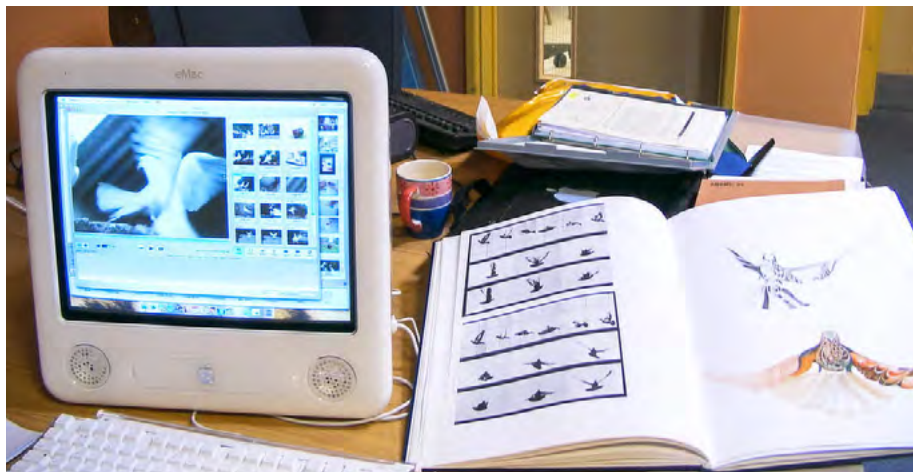


Image Credit:

If there is one topic that has generated more heat than light over my 30 year engagement with IT in Education, it is the issue of Learning Styles. I have known and worked with devotees of Multiple Intelligence theory, NLP and other ideas. At the same time, I know equally capable and insightful people who remain thoroughly unconvinced and argue that “there is no evidence” that there is any link between how a teacher teaches and how/what a student learns. It is many years since my wife, from both her academic and policy worlds, explained that

*“absence of evidence is not evidence of absence”.*

For my part, I have seen some appalling practise of converting personality/character/learner ideas into consulting tools and workshop activities that have only the most superficial grasp of what the underlying concepts and associated evidence actually support. Yet it seems to me, to be the heart of understanding learning in the digital age.

Let me put the question in a simple manner:

*“Do we all learn in the same way?”*

On a personal note I have always found the argument that “we learn by doing” difficult to accept. I failed touch typing 3 times. I failed my driving test the first time. I was terrible at a musical instrument despite loving music. But I learned to cook by working with my Nan and later with Mom.

As an undergraduate there was a point where I realised that I would never be a good physicist. I said to my tutor on one occasion that I couldn’t “see” the maths. We had a long conversation about “seeing maths”. He took my point seriously and it was a help. Yet 25 years later I was given a copy of MathCad to play with. I was able to deal with Maths that had evaded my younger self because I could see and play with it. When driving, I always have the radio on, or music, and, even if not concentrating, remember more than I do from reading. I love audiobooks, factual and literary.

This, of course, is one case induction. However, my own journey has encouraged me to believe that I am not alone. I have been a patron of the charity, the National Association for Able Children in Education (NACE) for many years. NACE works with member schools, education leaders and practitioners to improve provision for more able learners, driving whole-school improvement and raising achievement for all.

NACE believes that all children and young people, regardless of background, should be recognised and have the opportunity to realise their potential. We offer practical resources, support and CPD to help schools review and improve the quality of policy and provision for more able learners within a context of challenge and high standards for all.

In that role, and at conferences, I have met and learned about too many people who are simultaneously gifted and have learning difficulties, savants, for whom



the school-based classroom-focussed model can be problematic. I have also met some outstanding teachers who succeed despite the system rather than because of it.

One example illustrates my thinking well. There was a child in a secondary school with a primary age reading level and behavioural issues. When a computer was put into his classroom, he became engaged and stopped disrupting others from learning so was left to his own devices for a while. One day he showed a teacher a fly-through of Canterbury Cathedral that he said that he had built. He had taught himself virtual reality modelling language VRML, despite a reading age of primary years.



Image Credit: TK Becta DV Project

One thing that I miss from the days of NCET/BECTA was the work on IT and special needs education that was exceptional in showing how IT could lower barriers. That work was quoted, on the conference circuit, in many countries for

its clarity and evidence base. My ah-ha moment came with an introduction to the work of Tom West. His book, *In the Mind's Eye* has been important to me. I have bought 3 copies and loaned them to others, never to be returned, which may indicate that others feel the same.

In the 1990s, I was introduced to the world of Dyslexia, which is where Tom's work was so valuable. For some people Dyslexia was a special need, yet others saw it as a gift. That was true both of the predigital age and the current era. So, I became a convert to the notion of "visual giftedness". There are so many examples of the importance of visual thinking that I have found over the years. Let me illustrate with a few examples.

William Herschel was known in his time as the "Musician of Bath". Reading recently about him I found a phrase that appealed to me about his astronomical observations. It was felt that he could sight read the sky. I have been part of too many conversations around music as part of education.

Should it be seen as a transferrable skill?

On the subject of music years ago I got to know a very talented amateur bass-baritone. Despite 30 years of music, he still had problems reading music quickly. He found it difficult. Yet he learned his part in the Bach St. Matthew Passion in a weekend, in German and English, by singing with recordings that he owned. Can you be musically gifted and have problems reading music?

I would also argue that there are many writers whose spelling is weaker than they might be prepared to admit. Does that matter as much in an era of spelling and grammar checkers?

Crick and Watson, seeing the DNA structure for the first time saw the link between form and function immediately. Benoit Mandelbrot, creator of the eponymous set, was able to see mathematics that had been around for decades because of the availability of colour screens. His seminal paper "How long is the

coast of Britain?" is a wonderful example of visual thinking and very abstract idea creation. I remember a lecture given by Professor Harry Kroto, Nobel Laureate. His work on Buckminsterfullerene talked about the insight he gained from his interest in architecture and led to the naming (even though there is a significant difference).

However, it is not just dyslexia. I have a long-standing friend who has synaesthesia, seeing ideas in colours. Many people, including me, had difficulty understanding how he thought. When someone argues that a conversation was "a bit yellow" how do you react? To finish then, let me illustrate using the notion of "gamification" in education. I sat in as an observer on a few primary boys playing a football manager game. Reading the transcript was an interesting experience afterwards.

A conversation along the lines of the following illustrates my concern: "If we are going to go up the league we need a better goalkeeper. That will be £5m. But if our striker gets injured we won't have the money to replace him". That is how many adults work in making decisions. It shows a high degree of numeracy and systems thinking. Yet none of that is reflected in the criteria for grading primary learning of arithmetic.

I think that the arguments are far from clear and, as ever, "there is a need for more research". My challenge in response is easy to say, but harder to answer:

"What do we need the next generation of teachers to understand in the digital age, to use advances in our understanding of learning to help students achieve their full potential?"

That in turn requires a deeper question to be answered:

*"What research is needed to provide an evidence base for optimising teaching and learning in an age of pervasive technology?"*

The latter is needed if society is to develop educational policies that go beyond

fads and dogma. For me, it can't come soon enough.

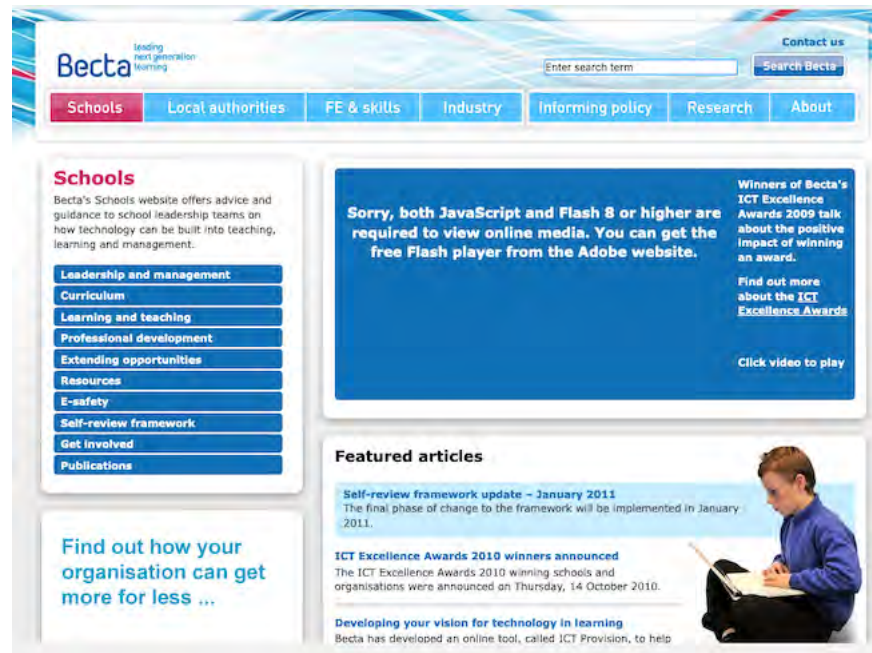


Image Credit:

### Chris Yapp

Chris 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. Chris\_yapp@hotmail.co.uk

## In 2022, what is social media?

Ian Coombes, Dr John Wollard



Image Credit:

### The answer might not be obvious

Data from Ofcom suggests that 87% of UK 12- to 15-year-olds now use social media apps, with the most popular platforms being Instagram, Snapchat, and Facebook (Ofcom, 2021). While children's use of video-sharing platforms such as YouTube and TikTok is almost universal.

In the UK, schools are expected to teach e-safety to their pupils which includes promoting positive online behaviours, ensuring an appreciation of potential risks and dangers, and this teaching is likely to reference social media. But when the term 'social media' is used in the classroom it might be assumed that everyone has the same understanding. Yet research I recently completed suggests that pupils in the early years of secondary education may hold divergent conceptualisation of social media, and this has implications for teachers.

### Definitions

Page 10

It will be useful to pause and reflect on the question, 'what is social media?'

How can it be defined? Looking to academic literature for a universally adopted definition is fruitless. Most of the writing in the field of social media research does so without including any formal definition. This is either because authors are investigating a specific platform (therefore a definition is not needed), or it is assumed that the term is so ubiquitous a definition is unnecessary.

There are, though, examples of social media definitions. In the first decade of the 21st century, when Facebook was still a novelty, danah boyd and Nicole Ellison identified three universal features of social media. It was a place where users could construct a public profile while presenting a list of friends and being able to see other people's friends. Within this environment, the users created and shared content (boyd and Ellison, 2007). This definition is very much of its time and is reflective of the core affordances of the then-popular platforms. boyd and Ellison defined social media through what young people were doing on the platforms.

A few years later paediatricians Gwen O'Keeffe and Kathleen Clarke-Peterson produced their definition via examples. They said social media included platforms, "...such as Facebook, MySpace, and Twitter; gaming sites and virtual worlds such as Club Penguin, Second Life, and the Sims; video sites such as YouTube; and blogs" (O'Keeffe and Clarke-Pearson 2011:800). While this approach appears helpful, over time the examples can become irrelevant or obsolete. MySpace will be in some adults' memory, but few children today would recognise Disney's Club Penguin.

Another final definitional example comes from the 600 page 'SAGE Social Media Handbook' which simply states that social media is "...digital internet technologies that facilitate communication and collaboration by users" (Burgess et al, 2017:3). Here all social media are defined in ten words.

## What pupils think

In research carried out during the pandemic, English pupils aged 11-14, many of whom were novice social media users, were asked to define it. Most knew the names of the largest platforms, Facebook, Instagram, WhatsApp, etc with a minority aware of some of the more niche sites such as Reddit, Tumbler and Discord. Yet some of the pupils' lists of social media platforms included some unexpected names.

Some 11- to 12-year-olds social media lists included Xbox (59%), email (37%) and even their smartphone (45%). Yet surely Xbox is a games console, email is communication software, and a smartphone is hardware. But are the pupils wrong?

## How are there such divergent views?



*Image Credit: TK created from a text prompt using Dale•E-2*

When asked to explain the reason for including Xbox or email as social media, it became clear that pupils' definitions broadly began from one of two starting points. Some pupils started with the affordance of the platform. If they could do on a device what they associate with social media, then it must be social media. Since this age group's dominant social media activity is communication with family and close friends, any product that facilitates chat, whether in text, image, or audio, is to their understanding, social media. This goes some way to explain why

games platforms such as the Xbox are included as social media. The extension of this view is that if you talk to a parent on your phone, then that too is social media. While some of these are minority views, they do exist in the minds of some younger secondary pupils. It is the affordance which drives the conceptualisation.

Other pupils though are aware of what products are designed to do. For them, social media are just those platforms which are designed and promoted as social media. They, therefore, conceptualise Xbox as a game console and email as a communications tool. While it may offer the capability of communicating with others, this alone does not make a product social media.

## Recommendations

The fact that pupils hold divergent internal definitions of social media is important for teachers who seek to teach pupils about e-safety. It may be useful to appreciate that the term social media may have diverse meanings for the pupils in front of them. Some will be thinking of Snapchat and Instagram, while others their PlayStation. It may be tempting to teach a carefully crafted definition of social media to the pupils, it is probably more important to recognise that the risks associated with traditional social media which include contact with strangers and habitual behaviours ought to reference any device where pupils communicate with others or have the potential to speak with new people. So, the online advice about not communicating with strangers, holds whether they are communicating via Instagram, Call of Duty or sending a DM (direct message) to a friend's older brother or sister. The risks will be similar.

The other takeaway from this research is, it may be useful for the teacher to appreciate which social media platforms are popular with the pupils in their school. National surveys may not represent local rates of adoption. So, using Facebook or any social media that teachers use as the classroom exemplar may render the advice irrelevant to some pupils. If teachers know what platforms children are using, then the examples and advice provided in the teaching can be

tailored to local experiences.

The easiest way to find out what pupils are using is to set up a short anonymous online poll. Ask the pupils to name their three most used social media platforms and see what they mention.

*Dr Ian Coombs & Dr John Woollard*  
*University of Southampton*

### References

*Boyd, d. and Ellison, N.B. (2007) Social Network Sites: Definition, History, and Scholarship. Journal of Computer-Mediated Communication 13(1): 210-230*

*Burgess, J., Marwick, A.E., and Poell, T. (2017) The SAGE Handbook of Social Media. London: SAGE Publications*

*Ofcom (2021) Children and parents: media use and attitudes report 2020/21. London: Ofcom*

*O'Keeffe, G.S., and Clarke-Pearson, K. (2011) The Impact of Social Media on Children, Adolescents, and Families. Pediatrics 127(4): 800-804.*

---

### Dr Ian Coombes



*Ian is a former secondary IT teacher and Headteacher. This year he completed his PhD at the University of Southampton investigating how young novice social media users conceptualise the technologies. He is currently completing research projects into open research practices across the university and analysis of undergraduate student course evaluations. He is also a dissertation marker for the University of Buckingham.*

### Dr John Woollard



*John is a teaching fellow in information technology and computer science education at Southampton Education School, University of Southampton. Following his PGCE in primary education at Redland College, Bristol he had a teaching career in primary and secondary schools in London and Hampshire as class teacher, subject teaching and SEN coordinator. John has had a variety of positions as consultant, advisor, writer and inspector working for Hampshire, Ofsted and a number of commercial and voluntary organisations. He has taught computing from early years, through to GCE, undergraduate and postgraduate levels. In 1997 he moved into higher education and then into teacher training. He gained his PhD in 2004. He currently works across both primary and secondary phase initial teacher education as well as supervising doctorate research students in computing, e-learning and pedagogy.*

## Three story-telling projects supporting Computing in the National Curriculum

Lawrence Williams:

TPEA Specialist Leader in EdTech Education,

After many years of teaching in the classroom, I believe that “creativity” is developed by pupils who have been given a very clear, even strict, set of guidelines and structures within which to work. It may seem paradoxical to argue this, but the more restricted the pupils’ parameters, the wider the range of creative responses that is developed. The setting of these rigid parameters has the additional, positive effect of focussing the students’ work on the learning outcomes needed by teachers in order to assess their work against National Curriculum criteria.

Having set all of these parameters, the pupils involved were then instructed to do whatever they liked, without being given concrete examples of what was expected. On the classroom wall, a poster was placed saying, “The answer is: Yes. What is your question?” Pupils were then encouraged to negotiate any aspects which they felt would be of benefit to their self-designated task. Experience as classroom practitioners suggests that whenever specific examples are given, pupils invariably offer up nearly identical responses. If you suggest writing a science fiction story and give, as an example, a journey to the Moon, you generally receive 30 almost identical responses: the resulting range of outcomes is severely restricted by the suggestions made. Vagueness, within the rigid structures set, (and accompanied by group discussion, of course), allows pupils to widen their own creative responses. This, the paradox of creativity, is particularly evident if the outcome is a collaborative venture. Three example projects follow. Additional learning outcomes are accessible through Google searches of the projects.

## The Three Projects

### Project 1.

Stories for Children 2: story-telling using PowerPoint to illustrate coding concepts



Fig.1 Example from the animal stories created to show a computer coding concept:

The original “Stories for Children” project was devised several years ago, working with the support of some brilliant classroom teachers in Taichung, in order to help us develop the learning of Mandarin Chinese in our UK schools, through bilingual story-telling, using school-to-school email-exchanged PowerPoint files. The new and updated version of this story-telling project aims to support the new UK Computing curriculum by creating stories that now illustrate computer coding concepts. They also build on story-telling work carried out by some pioneering PGCE students at Brunel University London. Each of the new stories, written originally by a Primary school student, Beth Mead, exemplify important elements of the current Computing curriculum, in an entirely accessible way. These stories can now be downloaded, entirely free, for use in the classroom. Discussion of this material is an important requirement, but it is, we hope, an entertaining way into computer science concepts. There is no single, agreed definition of computational thinking. It depends on whom you ask: programmer, logician, or mathematician. There are, however, several generally agreed elements, and these are explored in the online stories for children. These elements in the stories include:

Algorithmic thinking (following a set of rules; sequencing skills), Debugging (detecting and correcting errors), Decomposition (breaking a complex problem down into simpler parts), Logical thinking (reasoning skills), Generalisation (recognising patterns, and using them to find solutions), Abstraction (sorting relevant information from unnecessary detail).

Each of the above computer coding concepts was researched through the online Computing at School (CAS) resources, and discussed in class, before it was exemplified within the context of a simple story for children.

Here are examples (Fig.1) from the animal stories created to show a computer coding concept:

### **Project 2.**

#### **The Literacy from Scratch project: story-telling with Scratch**

Literacy from Scratch began in 2012 (Updated 2022), before the English National Curriculum in Computing was fully formulated. It started as a simple response to the UK government's planned introduction of Computing, but has rapidly developed into a cross-curricular, creative, collaborative, and international project. It has now been presented at several Computing conferences and was quickly adopted by universities in the Czech Republic, Italy, and South Korea. There is an accompanying Routledge text book for teachers.

Teaching materials on the Literacy from Scratch website are now quite wide-ranging, and the best starting point is the outline PowerPoint presentation, which can be downloaded for use by teachers in the classroom. This gives the basic story-telling plan of the project, as well as exemplifying the introductory Computing skills needed. Once these have been mastered, teachers can then use the search engines to find further elements that you need, such as help sheets, lesson plans for different year groups and subjects, and schemes of work, as well as extensive examples of how Scratch can be creatively developed both by teachers, and by their pupils aged from 5 to about 14.

Students as young as 5 years were easily able to complete a story (Fig. 2) with two characters, three backgrounds, and dialogue, in two languages (English text, Hindi voice-over), within only a few lessons:



*Fig. 2 Sample Scratch page by a five-year-old pupil*

### **Project 3.**

#### **Literacy from Python: using Python strings for story-telling**

This introductory coding project, using Python 3 strings for story-telling, builds on the success of the Literacy from Scratch model above. It encourages the development of (very) short story-writing at KS2 or KS3 (ages 10 to 12 years). These stories are then created using Python 3, and in doing so, a series of elementary coding concepts can be developed.

Students at secondary school level (11+) in the UK are, of course, required to be familiar with two computer programs. This frequently involves learning coding

through Scratch, a visual coding program, often started at primary level as the first required program. Python, a more powerful text-based language, is often added at lower secondary level (ages 11 to 14) but could be introduced earlier.

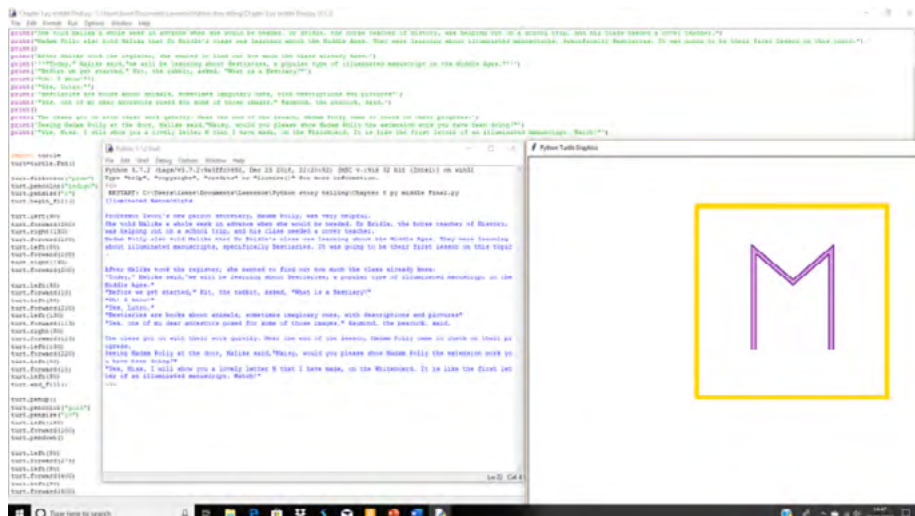


Fig. 3 Coding input with story output, and an “illuminated” letter M

In English lessons, students in Years 6 or 7, write a very short story which includes some dialogue. This story is then taken to the computer room, where, using Python 3, it can be reworked in the Idle programming window, and printed out in the Shell window as an elementary Python program. This model therefore adds creative and cross-curricular elements to the coding process. Teachers could also add many more computing elements into the stories, as well.

The projects presented here clearly exhibit different balances between the three main teaching and learning elements. Stories for Children 2 was less collaborative, and focussed more on the computer coding curriculum. Literacy from Scratch used the online versions of Scratch to develop short, animated stories with original illustrations, using Paint. It has been welcomed

internationally by teacher trainers. Literacy from Python consciously explores the development of computer coding skills through creative writing, and, following trials, has recently been incorporated into the Year 8 Computing curriculum in a south London secondary girls’ school.

The three creative writing projects (Stories for Children, Literacy from Scratch, and Literacy from Python) could not have taken place without the initial use of online teaching and learning materials, nor would they have been as successful without the stimulus of collaboration with other students and teachers in the UK, and abroad. Above all, the resulting high-quality and wide-ranging learning outcomes would not have been possible without the deliberate restrictions imposed by the teachers on the writing structures: the Paradox of Creativity.

### Lawrence Williams

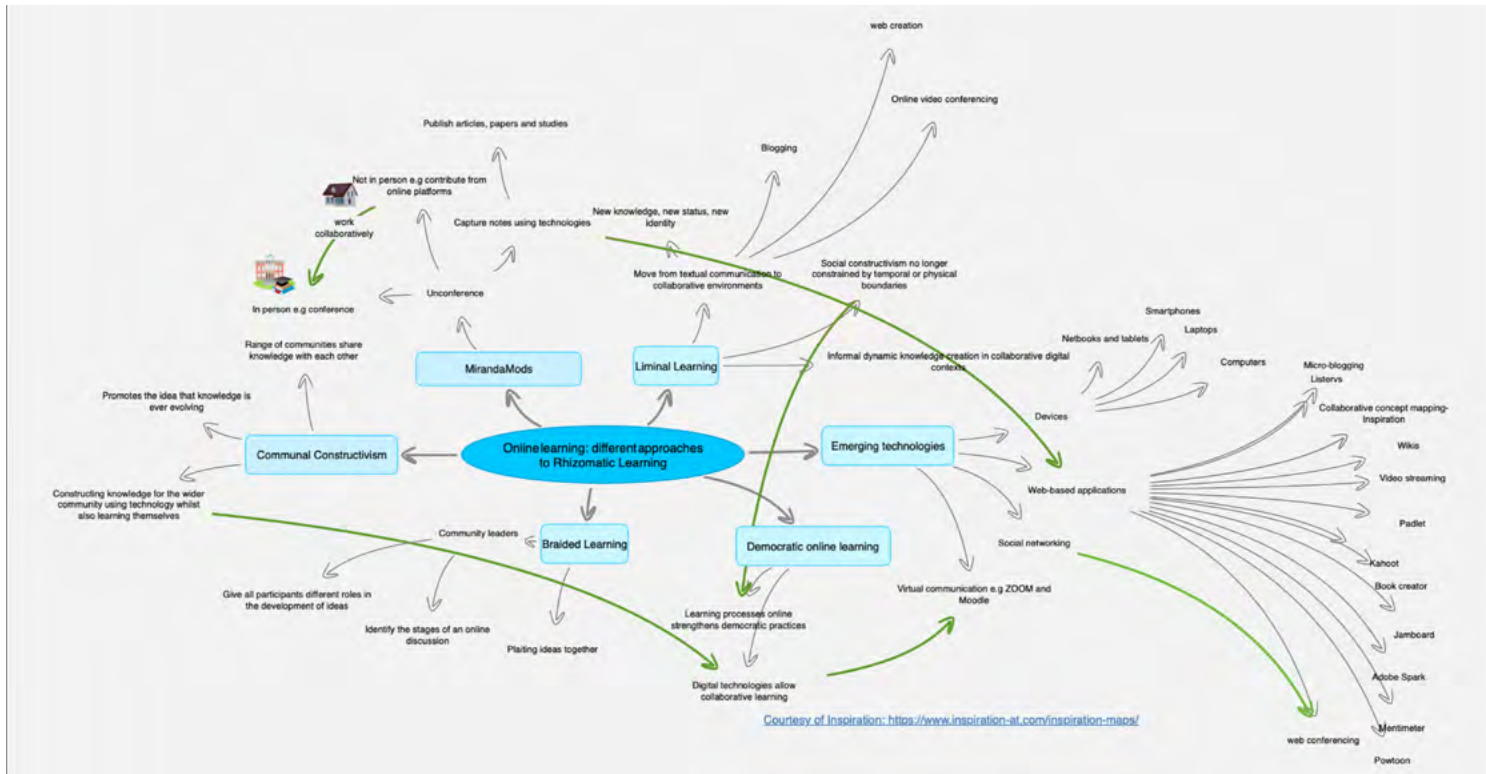


Lawrence is an experienced classroom practitioner, who currently teaches Literacy, and Computing, on ITE and MA courses at a number of universities and colleges in England and abroad, as TPEA Specialist Leader in EdTech Education. He is an Associate Member of the National Conference of University Professors, and has officially represented the United Kingdom at international ICT conferences. In 2012 received the Naace ICT Impact Award: Lifelong Achievement. His interests are in literacy, creative uses of ICT/Computing, cross-curricular teaching and learning, and international collaborations, on which he has written and published widely.



# Rhizomatic Learning Snapshot

Mike Blamires



All diagrams by: Hanefa Osman

## Snapshot: Online Collaborative Learning; different approaches

A Snapshot is an executive summary of a Case Study of a MESHGuide used in practice which highlights their context, outcomes, real and any potential benefits resulting from this collaboration with MESH. This includes connections to other issues and the potential for application by others in schools and other educational settings.

**Authors:** John Cuthell, Helen Caldwell, Hanefa Osman, Christina Preston, Sarah Younie (MirandaNet Fellowship [mirandanet.org.uk](http://mirandanet.org.uk)), In collaboration with: Mike Blamires, Stephen Hall & Marilyn Leask (MESHGuides) Rob Ellis, Linda LaVelle, Bozena Mannova (MirandaNet Fellowship), Nadya French, Gavin Hawkins, Laurence Boulter (Naace), Jon Audain, Chris Shelton (TPEA)

## Online Learning: Different Approaches

### Background information:

The aim of this MESHGuide is to provide knowledge to university and school teachers about methods of learning collaboratively online. The guide brings together research about effective online learning that has been developed since 1992. Some research has been derived from practice based research practices where the teachers themselves have undertaken research in the classroom with their students. These students then decide which of their findings they can feasibly implement.

The context is the exploration of the value of democratic learning at online and face to face conferences and specialist gatherings in which everyone involved is treated as an expert, not just the speaker. In fact, several speakers are asked to contribute to a learning session with just key ideas from their practice, experience and research.

Participants have recognised the power of this phenomenon and said that the notion draws on the impact of Citizens Assemblies and government 'Nudge' units and can be described politically as the pursuit of deliberative democracy. Others have simplified this notion as circle time for grownups.



Image Credit: [Utsman Media; Unsplash](#)

Relevant area(s) of research/education:



*Image Credit: Michael Coghlan, CC BY*

The rhizomes learning metaphor was first coined by the poststructural philosophers Deleuze and Guattari. Cormier's notion of rhizomatic learning allows educators to explore the process of learning with the rhizomatic lens. Rhizomatic learning posits that learning is a continuous, dynamic process, making connections, using multiple paths, without beginnings and which ends in a nomadic style.

Recognising the power of collaborative learning between participants who have knowledge and expertise in a chosen field. The premise is that learning can occur anywhere, anytime, and anyhow in the universally interconnected world. Technology afforded educators to provide flexible learning experiences whenever learners are ready. Knowledge transfer is no longer a fixed process but somewhat divergent and non-linear (Swe Khine, 2022).

Before this Rhizomatic Learning metaphor emerged in the international context, research members of all the professional organisations, TPEA, MIrandaNet Fellowship, Naace and MESHGuides have given this learning phenomenon different names: Braided Learning, Communal Constructivism and Liminal Learning are some of the terms we discuss here. However, the term Rhizomatic Learning can be applied to all of these as an overarching metaphor that is now recognised internationally.

## Examples: Liminal Thinking



Image Credit: [Denis Jarvis, CC BY](#)

Liminal thinking (Cuthell) is a term for informal dynamic knowledge creation in collaborative digital contexts which occurs as participants move from textual communication to blogging, web creation, online video conferencing and other such collaborative environments. Interactive and collaborative technology can be seen as creating a liminal space – a passage through which a person moves from one state of being to another. Participants in this liminal space are transformed by acquiring new knowledge, a new status and a new identity in the community, a change that is of critical importance if learning is to be successful. Cuthell concludes that as participants have expanded and developed the range of technologies and affordances provided by digital technologies, so the concept of social constructivism has accommodated these and expanded into the liminal spaces that are no longer constrained by temporal or physical boundaries, and are therefore truly mobile. Communal Constructivism (Leask and Younie)

## Braided Learning (Preston)

MirandaNet Fellows have adopted a metaphor to describe the theory underlying this collaborative knowledge creation that they call Braided Learning the notion of plaiting ideas together. Some of their research focuses on the ways in which community leaders can identify the stages in the life cycle of an online discussion and also to encourage all the participants to contribute online by giving them different roles in the development of ideas.



Image Credit: [Steve Johnson, Unsplash](#)

## MirandaMods (Drew Buddie)

As the years progressed, MirandaNet Fellows knitted together several different technologies so that members in a physical room could debate with members who were unable to travel. The generic term, 'unconference' is one in which the input of all the participants has equal weight. This contrasts with a conventional conference with nominated speakers who take questions at the end of their talk. A 'Mod' is a Scottish word for a meeting and one of the members, Drew Buddie, coined the term MirandaMod for MirandaNet debates using a collation of technologies that could be used to capture notes from which to publish articles, papers, and case studies to inform educators globally.



Image Credit: [Theo K](#), CC BY SA

### Keywords:

- networks
- communities
- professional development
- autonomous learning
- technology affordances

### Outcomes:

sharing is powerfully supported when the teachers, as learners, belong to a Community of Practice (CoP) . If we consider the metaphor of rhizomes learning, then the initial assumptions of connection and heterogeneity, with any point being connected to any other, then the collaborative activities of the professional Communities of Practice detailed above have connected, and continue to connect, with one another and work to develop new ideas and cross-fertilise existing ones.

Members link to other communities across national barriers and time zones.

### Direct benefits/How MESHGuides have 'come alive' in this project:

- MESHGuides can be used by anyone, parents, practitioners, volunteers anytime, anywhere in the world
- Direct impact on people's lives in beneficial way – putting ownership of learning and education back to teachers and learners
- Rapid response to an identified need – this has positive implications for individual schools and networks seeking to find evidence-based solutions to perceived needs

### Indirect benefits/Unexpected or connected issues/impact that this project has provoked:

- The underlying knowledge of these CoPs is used to generate new ideas and practice, with new shoots emerging in new places. It is an existential state of professional awareness that precludes stasis

### Further questions to explore:

- Which technologies facilitate effective knowledge sharing?
- Which pedagogical theories underpin collaborative online learning?
- What roles should a CoP adopt in knowledge sharing and theory creation?
- How do MOOCS change the online learning landscape?
- How can a MESHGuide help teachers grasp significant findings quickly?

### MESHGuides:

The Rhizomatic MESHGuide and resources will be found on the MESHGuides website in November

<http://www.meshguides.org/>

Technology Enhanced Learning Communities

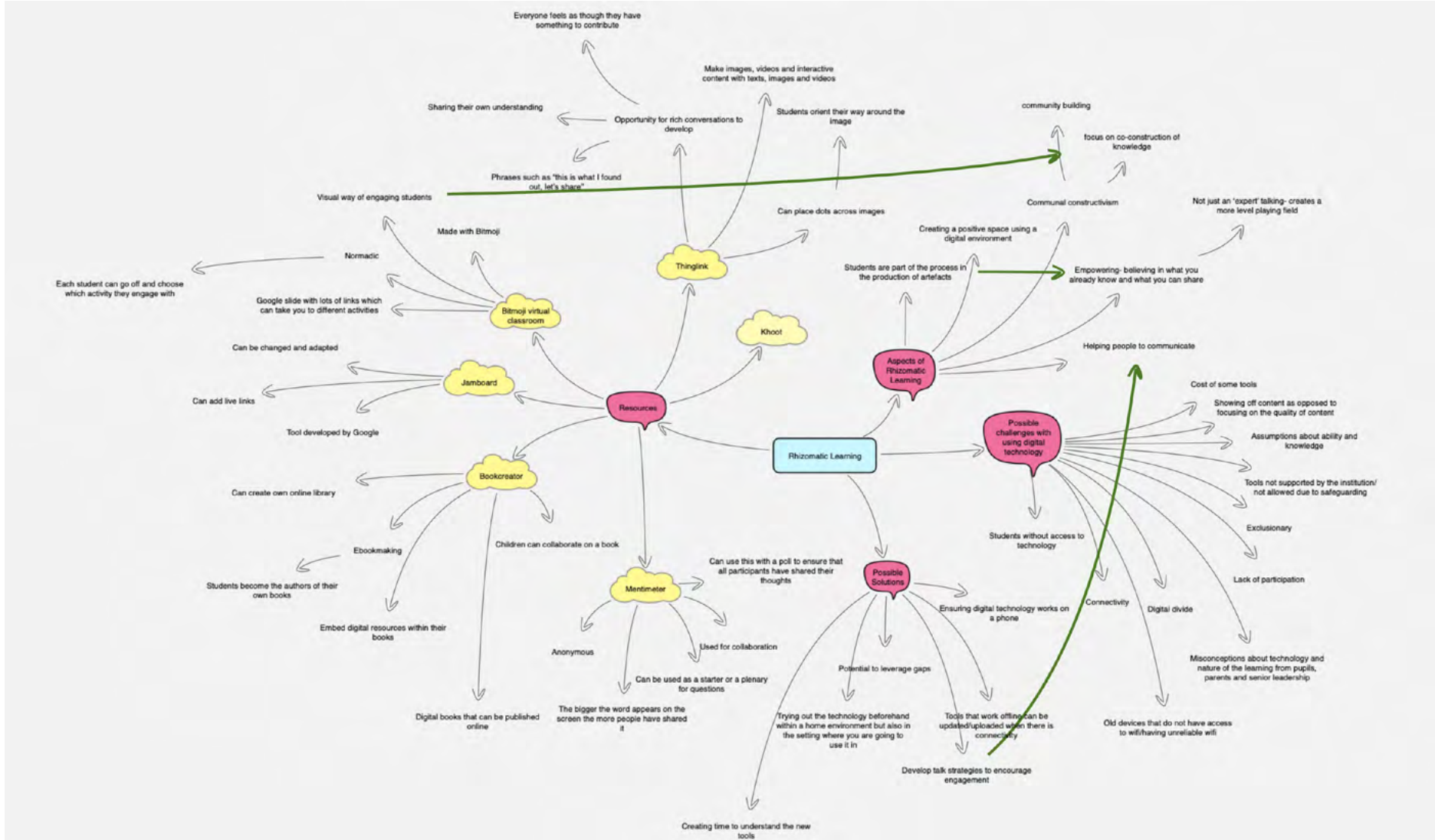
<http://www.meshguides.org/guides/node/880>

---

### Mike Blamires

*Mike Blamires has been a precarious pioneer of enabling technology, educational robotics and universal design for learning. He was strategic director of the Teacher Training Resource Bank and Deputy Director of Behaviour4Learning.*

*He is a MESH trustee and VSO volunteer working on Psycho Social Skills in emergency settings including Ethiopia and Rwanda.*



All diagrams by: Hanefa Osman



## Conference Report

### The 2022 World Assembly of the International Council on Education for Teaching

*James Noble-Rogers*

*I have chosen summaries of two keynotes from James' report by International speakers who seemed to offer important perspectives on the world of teaching outside the UK. The first is, 'Reforming the Teacher Education system in Ghana: the path to systemic impact' This was, for me, important because it was about the teaching profession and the government working in tandem to create a working system in education. The second was 'Reclaiming creativity and transforming teacher education in crisis time' from Larissa McLean-Davies from Melbourne, Chosen because of her optimism.*

*Christina Preston*

#### Reforming the Teacher Education system in Ghana

Akwasi Addae-Boahene was speaking on 'Reforming the Teacher Education system in Ghana: the path to systemic impact'. He was ably assisted by Bea Noble-Roger. The project began when it was becoming increasingly clear that Initial Teacher Education (ITE) for pre-tertiary education needed reform. High ambitions were set for an ITE system that would equip new teachers with critical thinking, enquiry skills, technological expertise, problem solving and communication skills, and would make teaching an attractive career option. The intention was to educate a cadre of teachers who would do much more than simply equip pupils to pass exams. Central to this work was the development of new and widely accepted teacher standards, an ITE curriculum and the introduction of a new four-year BEd, as well as a change in the culture and management of teacher education and the ending of a near monopoly by just one institution.

These reforms were, unlike in some countries, developed from the bottom up and agreed, following a 'big-conversation', with all relevant stakeholders, including the teacher unions, whose unanimous commitment and support were instrumental

in securing the agreement and buy in of the Education Minister and, following a change of Government, the agreement of the new minister and, the entire new cabinet. International experts subsequently described the reforms as being 'genuinely world class'. And early metrics point towards significant success. The work of TTEL has recently evolved into being less of a one-off project and is now recognised as an NGO, and as such, has secured funding of \$16 million dollars from Mastercard, and additional funding from Jacobs, to support the reform of secondary education. Key to the project's success, according to Akwasi, was stakeholder support, co-construction and political backing. The bottom-up rather than a top-down approach was commendable.

#### Reclaiming creativity and transforming teacher education in crisis time

The final keynote of the conference was on 'Reclaiming creativity and transforming teacher education in crisis time' from Larissa McLean-Davies from Melbourne, who spoke about the scope that times of crisis (Covid, climate change, the need for inclusion) can act as a spur to act creatively and to think outside existing paradigms, collectively to mobilise knowledge and understanding and crucially, to bring together people from different disciplines to meet changing needs and contexts. Much of teacher education has in the past been geared towards controlling rather than encouraging creativity, for example through the imposition of restrictive teacher standards and the assumption that knowledge is fixed and not open to critique. A project at Melbourne, which took account of the knowledge and understanding of indigenous people (e.g. in respect of having a holistic and joined-up understanding of place, and so of climate issues) has been re-imagining the teacher education curriculum to encourage a critical approach, the development of new partnerships, the bringing together of theory and practice and the breakdown of subject, disciplinary, philosophical and cultural boundaries. This approach contrasts with a 2022 report by the Australian government which would, if implemented, do nothing to address the new crisis-driven priorities or foster shared responsibility and the creation of

new knowledge. Key challenges were, she said: the need to consider teacher education with reference to the whole of a teacher's career; decolonising ITE; not only teaching what one already knows; the potential role of teacher educators as epistemic agents and brokers, and the need to speak back to – and recreate – teacher standards.

You can read the full report [here](#)



## Publication Reviews

### Story Machines: Will the robot who can mimic Shakespeare make authors obsolete?

By Mike Sharples and Rafael Pérez y Pérez

Review: Ben Spencer



“We have all read stories that have been written by software. They are just not labelled as such.” Those are the opening sentences of *Story Machines*, a new book about how technology could transform the way fiction is written.

Those two lines were not written by Mike Sharples and Rafael Pérez y Pérez, the authors of the book, but by GPT-3, a sophisticated machine that has revolutionised artificial intelligence.

“As an opening paragraph, it sounds plausible,” write the authors — yes, the human authors this time. “We could have asked it to write a short piece of fiction, a blog, a poem or a tweet.”

AI may sound like something from a sci-fi film, but it is everywhere. You use it when you send a text and words are suggested, if you have an Amazon Alexa device or use grammar checks on your computer. Yet AI gets unnerving when it becomes difficult to tell man from machine. If a computer can convince us it is a human, what else can it do?

AI is very good at imitation, but could it one day surpass our abilities as writers, as artists, as journalists?

To find out, I asked Sharples, emeritus professor of educational technology at the Open University, to use AI to produce a series of passages in the style of well-

known writers.

The Sunday Times books team chose extracts by Shakespeare, Jane Austen, Sally Rooney, and our columnist Jeremy Clarkson. Sharples gave the computer the first five or six words and instructed it to continue in the style of the relevant author.

So can you spot the differences? Here are two passages (Theo I need to discuss how to get the Jane Austen and the Jeremy Clarkson passages from this Times review)

“These machines have been trained on the internet and the internet is made up of small chunks and short paragraphs,” Sharples says. “It is not reflective, not analytic, not scholarly. On the surface, it is grammatically, stylistically OK.”

Crucially, Sharples says, neural network AI is not reflective. “It is a hugely efficient wordsmith, good at writing the next sentence, but it has no ability to reflect on what it has written as a whole, to say, ‘Is this coherent? Does this make sense?.....”

That means it is very good at producing a short extract of about 200 to 300 words, but beyond that the computer loses track of what it has said and meanders. If a human user gives repeated prompts, or the program follows a template, this problem can be overcome.....

But what about more abstract news? I experimented with using GPT-3 to produce a news report on Covid booster vaccines. At first glance the output was fairly convincing, listing the pros and cons of tweaking vaccines to match new variants. It even included a quote from a US health official. Yet upon investigation, I realised the quote was made up.

This, Sharples stresses, is where the danger lies. “It has no knowledge of causality, of ethics, of decency, of the law. It has no knowledge of how the world works.”

“You’ve got this dangerous situation, I think, where you’ve got machines that can perform in a persuasive way. They can perform as journalists, but they get basic

facts wrong or invent studies to prove their point. They are amoral.”

The AI is good enough so that, with a bit of prompting and a bit of tweaking, students can produce a fairly plausible, if mediocre essay at the push of a button. enabling them to come to their workspaces critically informed and energised with new ideas/materials and very importantly new connections to collaborate with. One of its many novel offers is the Knowledge Bank platform. Here readers can publish and share their thoughts, critical insights and best practice with others.

‘Teaching Times has enabled me to grow my network, share my expertise, continue to learn and develop ‘know how’ in key areas of my professional practice.’

### **A difficult time for the profession**

TeachingTimes is needed now more than ever. Support for those working at all levels in education is essential. In April this year, the National Education Union (NEU) published a survey of 1,788 teachers. Nearly half plan to quit the profession within the next five years; 44% said they would leave by 2027, while a fifth said they would leave as soon as within the next two years. Anecdotal evidence shows new recruits moving on before their third year. Life in the classroom is stressful but senior management is struggling too. They feel they are pulled in all directions, absorbing pressure from above, including external accountability measures, plus trying to deal with staff’s concerns, as well as parental and pupil worries.

We want to help teachers to be reflective about their practice and informed about current research in the fields of teaching and learning. When they are buffeted by government rhetoric or OFSTED Deep Dives, we want them to be confident about their subject knowledge, their role and their capabilities.

The first step on the ladder of reflective practice for teachers must be to evaluate their own experience and performance against the best in the country or internationally. TeachingTimes’ library of best practice allows for this self-

assessment and exploration. It also allows teachers to share their research and draw on colleagues’ knowledge and expertise to be more experimental in class. And if they want to know more about how to assess the effectiveness of their teaching, there are articles and KnowledgeBanks – collections of articles and resources on a theme – to help them with this too.

### **The road to publishing**

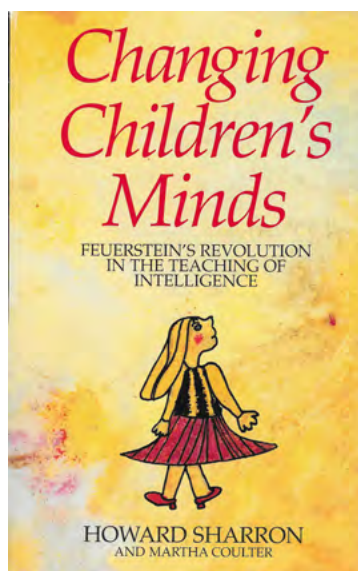
Howard Sharron, the CEO and publisher, has been publishing books, magazines and resources for over 30 years. After a degree in English at Birmingham University, he took up a place at the Centre for Cultural Studies in Birmingham. This was opened in 1964 and its first director was Richard Hoggart. His seminal book ‘The Uses of Literacy’, was published in 1957 and looked at literature, media, culture and class. He became an academic celebrity and was called on as a star witness for the defence at the obscenity trial of DH Lawrence’s ‘Lady Chatterley’s Lover’. Following in his footsteps, studies at the centre brought together culture, sociology and politics. Howard wrote articles for the New Society and went on to be a senior reporter on Social Work Today, edited by Des Wilson who eventually became one of the founders of Shelter.

As he developed an interest in education, Howard made a speculative trip to Israel. One of the people that he interviewed there was Reuven Feuerstein, an influential developmental, and cognitive psychologist. The interview was the basis of an article in the Guardian and generated more letters than any other education feature they had published up to then.

He followed it up with a book called Changing Children’s Minds which sold over 30,000 copies. ‘It brought into focus everything that was problematic about education in the UK, especially its failure to deal with some of the issues of assessing and improving the education of working class children.’ Feuerstein believed that intelligence was not fixed and that with the right interventions, people could develop the strategies and skills to become independent learners.

His work has been the model for many successful enrichment programmes around the world, including support for newly arrived refugees, children with SEND, psychiatric patients, adult retraining courses as well as gifted and talented pupils who are underachieving.

Howard started Questions Publishing in 1986. 'I noticed that the UK did not have any serious professional journals for education,' he said. 'There were academic journals that covered university research and there were newspapers but there was nothing producing serious in depth articles that brought theory and practice together.'



Early successes were Special Children magazine which ran till 2018 and Questions of Science which was a response to the then new National Curriculum. It went from zero subscribers to 5,000 in just a few weeks.

#### **A focus on technology**

Interactive was an early print supplement on technology and started in 1999, as a termly update focused mainly on assistive technology and basic ICT skills.

I was Commissioning Editor and wrote articles on dyslexia, technology for travellers and fairground people and a piece on the then social media phenomenon that was Friends Reunited.

This turned out to be one the most popular articles that I have ever written because it was light hearted, timely and assumed no technical knowledge. Those three attributes have coincided but rarely in the myriad articles I have written in the succeeding 25 years. I also wrote about many software and hardware companies which are still around today including Widgit symbols, Clicker, Dolphin.

In 2004, it moved to being a fully fledged magazine edited by Brian Astbury and then became E-Learning Today.

Questions Publishing became Imaginative Minds, with the magazine arm known as TeachingTimes, and adapted to change. There were more and different magazines for curriculum and management and to support vulnerable children. The company was an early adopter of publishing technology and popular because there were pull out materials that teachers could use in the classroom.

These days TeachingTimes is totally digital. The features look in-depth at a specific topic. Articles are generally around 1500 words but may be up to 2500. The homepage shows the latest articles from all topic areas that we cover. New articles go up every week and then the best articles are curated and sent out as digital magazines.

Many of our subscribers read TeachingTimes on their phone so we have changed the format. Gone are lengthy sentences and paragraphs and instead there are six magazine areas: Leadership, Professional Development, Digital Learning, Inclusion, Learning Spaces and Creative Teaching and Learning. There are also buttons for key topic areas such as blogs from commentators, climate curriculum and governance.

Many of the articles are written by well-known experts, leaders in their field both from the UK and internationally. Others are from the classroom and reflect the best practice in classrooms, pastoral care and management we have an online professional learning portal that gives teachers, school leaders, and anyone who is interested in education, access to a very extensive library of best practice, CPD teaching and learning and leadership articles and resources in a digital friendly format.

#### **Easy navigation**

With instant access to thousands of articles, we've provided tools to offer

different search routes. Just simply type in one or two keywords in the search box and the most relevant articles will appear. If you want the full list of relevant articles, simply press enter on the keyboard and then filter by broad topic area, author or key stage.

Another way of searching the site is to go via topics here on the top menu bar. This is more of a browser search and here you can find articles related to each of these browse terms. For instance, if you choose 'digital classroom', you will see a series of articles about developing a digital classroom. The important thing to remember is that this is just a recent selection.

There's a third way of searching by going via the archives. If you found the publication you particularly like, perhaps School Leadership Today, you can browse through the past issues and this can be very rewarding because there are so many articles in the library.

### Helping teachers on their journey

Users can bookmark articles that they like which will be stored in the teachers' own area for easy access later on. One of the things that we've done on site in certain areas is a digest of key searches. These are the Knowledge Banks that Dr Suanne Gibson praised. They are a collection of articles, resources and videos on key themes and a series of resources and videos that's been taken from either the TeachingTimes site or collated from resources teachers have tracked down or a school's internal library.

Knowledge Banks can be a useful tool to use with the School Improvement Plan. Let's just look at one of the most popular strands which is 'Talking about Oracy'. This was created by a teacher, but we liked it, so we published it on our site with their agreement. If the Knowledge Bank is distributed to all the teachers in the school's network prior to a meeting, then the teachers have the opportunity to study the content, gain knowledge, get an overview of key points and consider its significance in their setting. The discussion is likely to be more fruitful and better

informed.

Information in the Knowledge Bank can be repurposed to suit the individual school. It can be created, edited and amended. And the author can decide if it is to be a private resource, shared with others on the network or for public consumption, in which case, one of our team will check it before it goes live.

### Courses for teachers

Over the years we have run many courses and webinars for teachers and school leaders. Our latest venture is RAW - The Raising Attainment with Wellbeing Programme which we are running in partnership with Microlink. It has been designed by five top national coaches, led by Marius Frank, to help schools raise attainment levels by improving the emotional wellbeing and mental health of both pupils and staff. Put simply, better results and happier students.

There are five core modules:

- Raising attainment with well-being for school leaders
- Well-being and core strength
- Making sense of behaviour
- Changing culture and climate
- Accelerating development

There is an option for in-person coaching for schools as well. For further details see <https://courses.teachingtimes.com/>

### Resources for learners

Over the years there have been books and resources for the classroom. The government emphasis on Catch Up has brought one of our most popular resources into the limelight. MALS stands for Myself as a Learner Scale 8-16+ and in an echo of Feuerstein looks at ways to combat loss of confidence and learning anxiety after lockdown. It is a diagnostic questionnaire. It assesses a child's self-

concept as a learner and can pick out children who have lost faith in their own ability to succeed at learning. Often this is at complete odds with their real ability.

The Education Endowment Fund EEF - the government supported agency that evaluates the effectiveness of different resources and strategies has endorsed the use of MALS to diagnose children struggling after lockdown. The EEF Update says:

'We can consider what primary school rituals and goodbyes James missed last summer, or the crucial bonds between his peers that have weakened in the past months. In response, his school may use a useful diagnostic questionnaire, such as the 'Myself-as-a-Learner (MALs) scale' to help explore James' confidence and well-being in school.

All these diagnostic assessments will offer a manageable and meaningful route supporting pupils that is more instructive than the averages of national data.'

Call to action needed and prices

Dr Suanne Gibson describes Teaching Times as 'a fantastic one stop shop for everything progressive and impactful that education practitioners need to know'. Schools and universities are signing up to our magazines and courses and finding that it offers routes to career development.

Kalpana Jegendirabos, Assistant Headteacher at Haringey Learning Partnership told us: 'TeachingTimes has much to offer to teachers who are on their career journey. Thank you so much for giving me access to the site. It is awesome and couldn't have come at a better time. I have just begun my Masters in Research and didn't realise until yesterday when I logged in to the website what it was all about.'

## **Back to the Future : Research review**

*Harvey Mellar and Maria Kambouri*

Here are the first of a series of recommendations that will form the backbone of the MirandaNet Back to the Future project by Harvey Mellar and Maria Kambouri.

### **Using laptop computers to develop basic skills: a handbook for practitioners**

*Kambouri, M., Mellar, H., Windsor, V., & Kinsella, K. (2003). Using laptop computers to develop basic skills: a handbook for practitioners.*

This is one of several publications produced by the NRDC (NATIONAL RESEARCH and DEVELOPMENT CENTRE) to support basic skills development for adult learners. This handbook is intended as a reference source for tutors who want to use laptop computers to teach adults who want to develop their literacy, numeracy and ESOL skills. It was also designed for practitioners to develop their own ICT skills. Whilst the technology has moved on to some extent since this report was published the kind of activities used to support basic literacy skills are still relevant as examples of practice.

### **Greater than the Sum. Report of the Action Research Project: The Use of ICT in Adult Numeracy Teaching in Scotland**

*Coben, D., Crowther, J., Kambouri, M., Mellar, H., Moge, N., Morrison, S. & Stevenson, I. (2007) Greater than the sum... Report of the action research project: The use of ICT in adult numeracy teaching in Scotland, Phase 2. NRDC: London*

This is one of several publications produced by the NRDC (NATIONAL RESEARCH and DEVELOPMENT CENTRE) to support basic skills development for adult learners. This is the report of a staff development project on the Use of ICT in Adult Numeracy Teaching in Scotland with and for adult literacies tutors who designed and undertook action research projects with learners in various settings across Scotland.

The aim of the project was to explore, extend and improve the use of information and communication technology (ICT) in adult numeracy teaching in Scotland in keeping with the Scottish Executive's strategy for raising literacy and numeracy levels. It was largely based on tutors' reports of the progress of their own projects, aiming at co-production and co-creation of R & D materials and providing the

### **Effective teaching and learning: Using ICT**

*Mellar, H., Kambouri, M., Logan, K., Betts, S., Nance, B., & Moriarty, V. (2007). Effective teaching and learning: Using ICT. NRDC: London.*

This is one of several publications produced by the NRDC (NATIONAL RESEARCH and DEVELOPMENT CENTRE) to support basic skills development for adult learners. It is a report of a large-scale empirical study implementing ICT supported teaching approaches targeted at literacy, numeracy and ESOL learning objectives, which was followed by an evaluation of the effectiveness of these designs. Learners improved in almost all cases in both literacy/ESOL skills and ICT skills as well as building confidence, thus supporting the claim that 'Learners who use ICT for basic skills double the value of their study time acquiring two sets of skills at the same time' (Moser Report, DfEE 1999). The results informed the development of the CAVA model of teaching adult basic skills with ICT:

1. encouraging collaborative learning
2. encouraging learner autonomy, and consequently releasing teacher time to get to know learners better and to better adapt teaching to learners' needs
3. the use of a wide variety of technologies, and in particular mobile technologies to support greater flexibility
4. the use of technology to construct (usually shared) artefacts – which often allows learners to experiment with a variety of roles and also allows for greater differentiation in activities.



## App Review

Theo Kuechel

### DALL·E-2 - AI image creation



DALL·E-2 prompt: *One Flew Over The Cuckoos Nest*

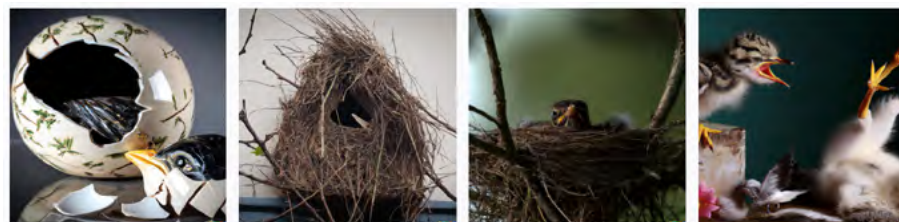
Some readers may have noted that certain politicians now want to include AI within Education Policy. Whilst this is firmly within the scope of AI; Reading between the lines one can assume that this is just rhetoric, and it seems unlikely there is any real understanding of AI or how to implement it.

As indicated in with Mike and Rafael's review of *Story Machines* earlier, It is a fact; that whether we realise it or not, AI is becoming central to many aspects of our lives: self driving cars, face recognition, personalised shopping / travel, social media algorithms, helplines / chatbots, and healthcare to name a few. There can be no doubt its impact on education will become as far reaching as in those instances.

Whilst the politician's stated aim is to reduce workload, AI has the potential to do much more. UNESCO addresses this within their current AI policy document; [Artificial Intelligence in Education](#)

1. *Learning with AI (e.g. the use of AI-powered tools in classrooms)*
2. *Learning about AI (its technologies and techniques)*
3. *Preparing for AI (e.g. enabling all citizens to better understand the potential impact of AI on human lives).*

[DALL·E-2](#) is a new AI system from Open\_AI that creates photo-realistic images and artworks purely from a natural language text input. It is simple to use; just enter some text and it will generate 4 slightly varying images in one click with only a few seconds wait time. One can combine concepts, attributes, and styles in the text. The results are presented as a row of 4 square format images, with the option to modify them further by augmenting the text prompt or generating variations or even edit them by removing parts and sub. You can save your images in collections or share them online.



One can also make realistic edits to existing images by editing the text caption. one can add and remove elements while taking shadows, reflections, and textures into account. Another way to work is to upload images and create and edit variations based on them. In the following example created by uploading "*The Marriage of Arnolfini*" by Jan Van Eyck, the right hand image was augmented by adding "with an owl" in the apps text entry field".



DALL-E-2 raises some fundamental questions; What is creativity? What is originality? Furthermore there are also ethical issues to consider and possibly copyright issues, if in copyright works are used to generate images

DALL-E-2 is still in Beta, the reason being it needs to put safety mitigations in place and remove explicit content, or fake images of real people. You need to join a waitlist to use DALL-E-2 but if you are eager to get started before your invite arrives, there is a very similar app, [Craiyon](#), to experiment with. You can read the published research paper on DALL-E 2 [here](#)

DALL-E 2 works because it understands how text relates to images. The system uses a process called 'diffusion.' With diffusion, DALL-E starts with a pattern of random dots and gradually changes the pattern of dots toward an image 'when it recognizes specific aspects of that image.'



*DALL-E-2 prompt: It is raining sheep*

There's

No doubt educators will have a lot of fun with DALL-E 2. Whether they want to illustrate children's books, design unique products, show scientific process, or create images for stimulus and discussion, DALL-E-2 will generate them.

AI systems such as DALL-E-2 are applicable to all three aspects of the UNESCO statement.

ISBN 978-173975172-2



9

781739

751722