

NAAACE

THE EDUCATION TECHNOLOGY ASSOCIATION



Rohingya refugees, Bangladesh: Image Credit: EU Civil Protection and Humanitarian Aid CC BY ND

A letter from the chair of Naace

Dear Naace members

We've probably all noticed that most editorials these days are framed against where we are in our COVID journey. I'm as guilty as most in this but if we are truly moving away from a sense of crisis now is the time perhaps to look up and beyond the pandemic horizon. That does not however mean that we ignore our experiences of the last 18 months, rather allow our renewed perspective to refresh our understanding of the world around us. The articles in this edition of Advancing Education point us towards a potential theme that may only become apparent when considered together.

Dr John Collick reminds us of how Promethean's support is creating a seamless teaching space between school and home, but goes on to describe the need for tasks enabled by the tools offered by ActivInspire to move away from the computer screen out into the real world. John Galloway considers access to learning and reminds us that an inclusive approach is a necessity if we are to truly enable an Anytime Anywhere approach for all, and this theme is developed further by the account of the work of MESH Educators and the VSO in ensuring access to children in Rohingya. Steve Moss takes us through the work of the Teaching Through Technology Alliance with its focus on community engagement and Mike Sharples explores how the environment and its community outside of school might become part of a wider learning sandbox. So, when Bob Harrison asks if our understanding of cause and effect is broad enough, and wonders if we are looking in the right direction, it begins to feel that the focus is moving away from the classroom into the community.

That's a big step. Perhaps not entirely provoked by COVID, as Christina reminds us, much of this thought predates the pandemic, but our COVID journey with its use of technology will have changed our view of the potential to move towards a form of education that draws-in larger parts of our social and physical infrastructure.

If we wanted to devise a roadmap to use technology to connect education with the world outside the classroom, this edition of Advancing Education would be a good place to start.

Your sincerely,

Laurence Boulter

Naace chair

CONTENTS

A letter from the chair of Naace	2
Editorial	4
<i>Professor Christina Preston</i>	
Thinking About Edtech	
A Challenge to Enhance the System of Education	7
<i>Mike Sharples</i>	
Learning Loss and Catch Up... it's not that simple	14
<i>Professor Bob Harrison</i>	
Practical EdTech Solutions	
Teaching Through Technology – an American Experiment / a UK Partnership	18
<i>Steve Moss</i>	
What are MESHGuides?	24
<i>Stephen Hall, Staffordshire University</i>	
<i>Jonathan Doherty, Leeds Trinity University</i>	
<i>Sarah Younie, De Montfort University</i>	
Inclusion through technology with Universal Design for Learning	33
<i>John Galloway</i>	
Managing the classroom-home hybrid continuum	36
<i>Dr John Collick, Promethean</i>	
Book reviews	
Exploring Teacher Recruitment and Retention: contextual challenges from international perspectives. Oxford, Routledge	39
<i>Review by James O'Meara, Dean College of Education, Texas A&M International University,</i>	
Understanding And Using Educational Theories	40
<i>Reviewed by Terry Freedman</i>	
News	
Creating a better future by transforming education	42
<i>BETT22</i>	

EDITORIAL

Professor Christina Preston

Dear Naace member,

Thinking about EdTech

The value of education technology has been enhanced by the pandemic because so many more people have been dependent on online learning. In this edition of the Advancing Education Journal we celebrate some of the ongoing projects that began before the pandemic and will continue long beyond.

In our first article, Professor Mike Sharples looks at the potential power of technology as civilisation progresses. For the past hundred years, he explains, grand predictions have been made about the future of education. Looking back, they appear to greatly overstate the power of technology to change this super-stable system. In a magazine article published in 1913 Thomas Edison was quoted as saying “Books will soon be obsolete in the public schools. It is possible to teach every branch of human knowledge with the motion picture. Our school system will be completely changed inside of ten years.” Over the succeeding decades similar predictions have been made about the transformative power of educational television in the 1960s, language labs in the 1970s, computer based instruction in the 1980s, integrated learning systems in the 1990s, virtual worlds for learning in the 2000s, and Massive Open Online Courses (MOOCs) in the 2010s.

Mike sets out a challenge to enhance the system of education because, as he points out, it now seems clear that no injection of technology alone will transform education, in the way that a driverless car will not alone transform road transport. So what should be the grand challenges for technology enhanced learning? he asks.

‘Learning Loss and Catch Up... it’s not that simple’ is the title of a thoughtful article by Professor Bob Harrison that asks whether in fact there have been learning gains in this new generation of school children - but perhaps not the ones we expected. Bob delves behind the headlines and mythologies to find whether there are any golden threads in the tragedy and challenge of COVID-19. He asks difficult questions about the role of educational technology in the ‘new normal’ and questions the effectiveness of the government in the last ten years who have ignored the experts. But might there be some good news from this? Is Learning Loss real? The COVID-19 ‘Golden Generation’

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.

Practical EdTech Solutions

The next article is by Steve Moss, who has been a very effective chair of Naace in the past. He reminds us of the discussions Naace began with the T3 team in the USA about adopting and adapting the T3 Alliance programme for schools in the UK called Teaching Through Technology – an American Experiment / a UK Partnership. A memorandum of understanding between the two organisations was signed in January 2021. The Naace team, led by Gavin Hawkins, started the search for a group of schools which were dedicated to supporting underserved communities and those underrepresented in higher education, and which had a strong focus on STEM subjects. Ormiston Academy Trust (OAT) was approached and responded enthusiastically to the opportunities which the T3 programme provided for their staff and students. An initial cohort of 3 teachers from 3 OAT schools undertook the training in January 2021. This was provided live online by experienced T3 Alliance trainers from the USA programme. The evaluation responses were very positive and the teachers indicated strong intentions to roll out the curriculum to groups of students.

Steve goes on to say that it would be ideal if the Naace / T3 Alliance pilot programme were to be picked up by UK universities as part of their Widening Participation activities, thus echoing the way that the programme runs so successfully in over 30 universities and colleges in the USA and its territories, from Puerto Rico to the Marshall Islands. He provides the contact details for any UK university or school wishing to explore this possibility.

We then move to an early years education project in Bangladesh that focuses on Rohingya children. The MESHguides charity that has been featured in this journal before is this time working closely with the international charity Voluntary Service Overseas (VSO) to produce a MESHGuide on Early Childhood Care and Education (ECCE) to support 'Education in Emergencies'. This MESHGuide provides practical advice and guidance, informed by research for teachers/volunteer aid workers/parents and siblings, to address UN Sustainable Development Goal 4.2, which emphasises the importance of early childhood development in preparing all girls and boys for primary education.

In this specific case thousands of Rohingya refugee children have been living in camps in Bangladesh. Very young children have experienced violence and ongoing trauma and still lack safe spaces to learn and play. Working in partnership with the VSO, the Early Childhood MESHGuide, an online knowledge map focusing on the learning of very young children, has been developed by volunteer educators from ten countries working online to provide practical advice and guidance for local people and VSO volunteers in refugee camps. This provides a rapid response to a critical need for families and children missing education at an influential time and who urgently need interventions and learning support. The turnaround time from identification of the problem to publication of the Early Childhood MESHGuide was a matter of weeks.

One of the conclusions is that going forward greater emphasis should be placed on the thoughts and perceptions of the child and these should be more evident in project evaluations. This is in line with Article 12 of the United Nations Convention on the Rights of the Child, which states that all children with the capacity to form views have 'the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child.'

This is an important ruling that is not only appropriate to children in war torn areas but to children in distress wherever they are.

In the next article we move to the use of technology with Universal Design for Learning (UDL) to ensure inclusion in its widest sense. John Galloway maintains that if we can remove barriers that some of our learners may experience, we can improve the educational experiences, and outcomes, not just for them, but for many others of our learners, too. His thesis is that if an accommodation is accepted across all designs,

it is not necessary to make specific adjustments for individuals. One example is in avoiding a red/green combination in any materials produced because it can be difficult for students who are colour blind. This is not a big deal for those who do not have the problem whereas the red/green combination will exclude those who have the disability.

The final article covers the management of the classroom-home hybrid continuum.

“Digital divide and educational inequity have been words on everyone’s lips having seen the shortage of personal devices, poor internet connectivity, lack of bandwidth and cost of data all contributing to students struggling to access learning materials remotely”, says Dr John Collick, a consultant to Promethean, one of the Naace company sponsors. John goes on to comment that as the UK and Ireland are slowly emerging from nationwide lockdowns, the unpredictability of the situation in hand has drastically impacted the way teachers prepare for lessons and conduct delivery. For example, self-isolation, shielding and sickness all impact a school’s attendance levels for both teachers and students.

With that in mind, the education sector is somewhere on a continuum which swings between all students learning from home, all learning in the classroom, and somewhere in between. As such, the most significant learning in recent times is the role that hybrid learning has to play in supporting schools in seamlessly moving along this continuum.

The article outlines some potential priorities and ways in which schools can achieve educational continuity in the face of uncertainty.

Two books are reviewed in this Journal. In the first, *Exploring Teacher Recruitment and Retention*, the authors draw on contextual challenges from international perspectives.

International experts provide a timely and comprehensive exploration of contextual challenges associated with isolation, teacher recruitment and retention. Part I explores a range of perspectives on recruitment and retention of teachers in England. The authors raise critical questions about shortages and workforce supply in England in well-crafted critiques, research informed positions, and context-specific discussions about the impact of teacher workforce supply and shortages in England. Part II of the book expands the context contributions to include international perspectives on teacher recruitment and retention.

The second book review is about *Understanding And Using Educational Theories*. Terry Freedman, who reviews the book, applauds the comprehensiveness of the coverage.

The first edition covers 14 theories, including Etienne Wenger’s communities of practice. The second edition includes three more theorists and their theories. He indicates that the book gives a very succinct account of each theory, and provides a good starting point for further education. But readers will want to explore in more detail the theorists that they encounter here if they relate to their current work.

News about BETT22

Naace will be having a stand at BETT22 where we hope to see many members. But BETT are also organising a virtual conference so keep an eye on that programme too.

Hoping you enjoy your summer read, Warm regards to you all,

Professor Christina Preston

Thinking About Edtech

A Challenge to Enhance the System of Education

Mike Sharples



Future Connected City. Image Credit: JCT600. CC BY SA

Technology and educational transformation

Technology enhanced learning is a complex system that consists of much more than a set of research-informed products (TELRP, 2013). It encompasses a dynamic interaction between communities, technologies and practices, informed by pedagogy. Some aspects of this dynamic system are very difficult to change because they are bound together in a mutually reinforcing mesh. Formal education consists of an interlocking set of curricula, standards, examining processes and teaching practices that are very difficult to shift. Similarly, commercial educational publishing of textbooks and journals has been slow to respond to external pressures for interactive media publishing and open access.

For the past hundred years, grand predictions have been made about the future of education. Looking back, they appear to greatly overstate the power of technology to change this super-stable system. In a magazine article published in 1913, Thomas Edison was quoted as saying, "Books will soon be obsolete in the public schools. It is possible to teach every branch of human knowledge with the motion picture. Our school system will be completely changed inside of ten years." Over the succeeding decades similar predictions have been made about the transformative power of educational television in the 1960s, language labs in the 1970s, computer based instruction in the 1980s, integrated learning systems in the 1990s, virtual worlds for learning in the 2000s, and Massive Open Online Courses (MOOCs) in the 2010s.

It seems clear that no injection of technology alone will transform education, in the way that a driverless car may transform road transport. So what should be the grand challenges for TEL? Arguably, the nearest to transformative technologies for learning to date have been flipped learning (Hamden, McKnight & Arfsrom, 2013) and the MOOC. Neither of these arose from a Grand Challenge or a major research programme, but rather they emerged from individual initiatives (by Salman Khan, Dave Cormier, George Siemens and Stephen Downes, the latter three inspired by the Open Educational Resources movement). Flipped classrooms and MOOCs are both combinations of technology and pedagogy, they bridge the gap between

formal and informal settings for learning, and they address the affective aspects of learning, motivating people to learn through attractive media and inspiring teaching. They also have broad applicability across ages and sectors, their reach is global and, most importantly, they don't seek the permission and purchasing power of formal education.

Smart cities

Taking these aspects as indicators of possible success (combining technology and pedagogy, bridging formal and informal settings, addressing affective aspects of learning, broad applicability, and ability to grow outside the formal education sector), how do the Grand Challenge Problems measure up [at the end of this article is a reference to the publication where the Grand Challenge Problems are presented]? Perhaps the closest match to these criteria is in the GCP1 Smart City Learning challenge. The opportunity here is to extend a city's infrastructure to enable learning. Just as cities are places for living, working, shopping and travelling, so they can be sites for learning. To some extent they already are, but the learning has tended to be confined to specific locations (libraries, museums, galleries) or to learning about the city itself through information boards and signage. The opportunity is to extend the city as a site for learning: about its inhabitants, its structure, its history, and about the fabric and dynamics of cities in general. Major tourist destinations such as London and Florence are obvious candidates. The Streetmuseum smartphone app by the Museum of London provides an augmented reality tour of the streets of the city, with the ability to hold the camera up to a present-day street scene and see how it looked in the past, accompanied by information about historical events.

But as the grand challenge indicates, all cities could become "inclusive and supportive of the whole complexity of human learning". Just as many bus and tram stops offer dynamic information about the next arrival, so buildings could inform about their energy usage, or streets about their levels of carbon monoxide and other pollutants. Residents in a city could create stories, trails and language resources for visitors. Art and culture can be taken onto the city streets through augmented reality graffiti. The learning can be enabled by self-directed interaction with resources in situ, by enhancing meaning-making through annotation of places and artefacts, by making connections between people in actual locations and online ones, and by creating storytelling trails that lead visitors and new residents through enriched paths around a city. The challenge is how to make this work in a way that informs, enlightens and inspires, creating a greater affinity with the living city, not just a new electronic cacophony of city noises and images.

Connecting learning in formal and informal settings

Other Grand Challenge Problems explore the connections between learning in formal and informal settings. The GCP5 and GCP6 grand challenges envisage vocational education students as 'connectivist' learners, bridging the divide between the workplace as a site for acquiring procedural knowledge and skills, and the classroom as a place for sharing and reflecting on situated experience and for refining skills. For this to happen, schools in the vocational education and training (VET) sector must be more tightly connected to the world of work. Technology can assist by allowing learners to capture workplace incidents as video clips, to explore simulations of their real work settings, and to take their reflective practice back into the workplace through mobile devices. In the Dual-T project Motta and colleagues (Motta, Cattaneo & Gurtner, 2014) equipped apprentice cooks, pastry cooks and car mechanics with headband cameras or smartphones to capture workplace incidents on video that provided resources for discussion in the classroom. They conclude: "Capturing visual materials through mobile devices on activities experienced at the workplace and using them at school to promote specific learning activities can constitute an effective way to give apprentices the chance to learn and reflect on their own professional background" (Motta, Cattaneo & Gurtner, 2014, p. 176).

But for this to happen on a large scale, teachers need to extend their practices to embrace not only the new technologies but also the new connections to the workplace that these enable. As GCP5 indicates “schools must be reorganized as a learning community that shares and connects experience among itself and with the workplace”. However admirable the aspiration, it is unlikely to be realised, at least in the short term, within the constraints of current vocational education. There are no incentives within the current over-stretched system for teachers and learners to share experiences or exploit technology to connect with workplaces. Perhaps the best hope for the future lies in new industry-education partnerships, such as the University Technical Colleges in the UK that offer partnerships with companies to undertake project-based vocational learning enriched by technology.

Technology-enhanced science inquiry

A similar systemic resistance to change is faced by attempts to empower science teachers with technology-enhanced scaffolding to improve inquiry learning (GCP3). The curriculum may require students to understand science inquiry, and individual teachers may be inspired to adopt inquiry methods for science education. But factors including timetabling, health and safety regulations, lack of equipment, and a reluctance to allow students to use their own smartphone devices as tools for data capture, mean that it is difficult, if not impossible, to enact a full cycle of inquiry-based learning within the classroom. There are opportunities to extend inquiry learning beyond the classroom, with the teacher and students deciding an inquiry question in class, then the students using mobile devices to collect data at home or outdoors, and then sharing and presenting the results back in class (*Anastopoulou et al., 2012*). However, this requires a teacher who not only understands the methods and practices of ‘extended inquiry learning’, but is capable of managing the disciplined improvisation needed for a classroom lesson to integrate the data collected by twenty or more learners on mobile devices, and bring the inquiry process to a satisfying conclusion.

Providing a teacher with a ‘virtual assistant’ (GCP3) to analyse and respond to individual learners may seem like a means to address this problem by reducing the burden of classroom management. But this raises a classic problem of artificial intelligence for the real world. The nature of genuine scientific inquiry is that it may produce unpredictable findings, so either the inquiry activity must be constrained to fit the limitations of the virtual teaching assistant, providing simulated results within narrow parameters, or the human teacher will need not only to manage a class of human students but also to interact with a virtual assistant when it fails to cope with the complexities of real data, and explain its limitations to the students. Injecting virtual teachers into real classrooms is likely to increase, not reduce, the complexity of science teaching.

Learning analytics

An alternative approach to virtual assistance is to empower the human teacher to make appropriate decisions, based on rich data about student learning, whether that occurs within the classroom, outside it, or online (GCP4, GCP7, GCP8, GCP11, GCP12). This approach of providing ‘teacher dashboards’ of real-time information about learners’ knowledge, activity and emotion has much appeal as a grand challenge. It attempts to empower rather than replace the teacher. It is based on a theory and practice of visible learning that is shown to be effective in improving learning outcomes (*Hattie, 2009*). It recognises the real or online classroom as a site of complex cognitive, social and emotional interactions. And it can be extended to a large scale – for example, the STEMscopes online science curriculum can provide visualisations of the activity of 50,000 teachers and over a million students. The most effective approaches so far are beguilingly simple. The Purdue Signals system (*Pistilli & Arnold, 2010*) provides an early warning system of problems with a course or with individual students by automated analysis of performance data into a ‘traffic light’ visualisation. A green signal shows that the work is progressing smoothly, amber indicates areas of concern,

and red flags up significant problems. These signals can be shown to the teacher or to students, and the teacher can intervene by contacting students at risk of failure to offer support. Analysis of outcomes for courses that have used the Signals system, show a consistently higher level of exam grades (Pistilli & Arnold, 2010).

So, analytics for learning can work. The irony is that it does so by reducing the dynamic complexity of learning to three colours: green, amber, red. But that apparently reductive simplicity belies the sophistication of the approach. It can provide similar information to both teacher and students, leading to a convergence of understanding and goals for improvement. It can be applied dynamically, providing timely feedback on performance. It can reveal problems with a course, with groups of students, or with the performance of individual learners. And it can provide a basis for action, by identifying a source of difficulty and an opportunity for focused teacher intervention.

We should also be aware of the limitations of this approach, since analytics is not a panacea: it is no substitute for an inadequate curriculum or weak teaching. A dashboard can only reveal what can be measured. Currently, this is largely based on when the student has completed an activity, such as viewing a page of online material or contributing to a forum, or has taken a test.

A grand challenge is to extend this to other kinds of learning and interaction, such as self-regulated experiential learning in groups (GCP2). The signals from learners could include facial expression, speech patterns, eye movement and physiological data such as heart rate. There may be a temptation to dismiss this emotional data as pseudo-science: measuring how much children fidget as an indicator of their boredom. But emotional self-regulation based on bio-feedback from heart rate and skin conductivity has been shown to help financial traders improve their decision-making – particularly, in addressing a key problem known as the ‘disposition effect’ whereby investors in a volatile trading market hold on to losing positions for longer than to winning positions (Peffer & O’Creavy, 2012). Can similar methods be used to assist classroom or online learning by helping learners, individually or collectively, understand and manage their emotions?

For learning analytics to be extended across formal education does not require the wholesale reform of schools or universities. Indeed, a criticism levelled at learning analytics is that the collection and analysis of educational data reinforces traditional teaching practices and sustains inequalities, providing more opportunities for testing and number-crunching rather than innovations such as project-based learning that may be harder to measure. As GCP8 indicates, ethics and social responsibility should be at the core of learning analytics, not only in setting boundaries on what data should be collected, but also questioning whether data collection leads to greater accountability, or to teaching by numbers.

Where learning analytics can work well, is when the data can be visualised in ways that provide immediate feedback to learners on how they are progressing in relation to goals they have set themselves, to teachers on where to intervene and support, and to policy makers in exploring opportunities for redesigning education. These feedback loops then may enable an educational system that is dynamic as well as complex, working to achieve goals rather than stifling change, and empowering innovators not just satisfying administrators.

A challenge to create dynamic and innovative systems of education

Thus, an overarching challenge is to employ technology in ways that create dynamic and innovative systems of education, where teachers, learners and policy makers are enabled to explore new methods based on combinations of powerful theory and sound evidence. For this to happen, educational institutions need to become learning systems, with educational technology as the mechanism for institutional development as

well as for enhancing learning. We can picture this, in Figure 1, in terms of the organizational double loop learning of *Argyris and Schön (1974, 1987)*.

Figure 1. Double-loop organizational learning for educational change



An effective learning organization is not only able to adjust to changes in the external or internal environment, but also to reflect on the process of change and thus change its objectives and strategies to enable more effective working. The system of education now has both the methods and the technologies to put this into practice. Innovations in pedagogy (*Sharples et al., 2014*) and studies of the relation between learning theories and effective practices (e.g. *Hattie, 2009*) can provide guides to theory-informed educational innovation. These can inform a productive cycle where analyses of current practices, using learning analytics, provide grounds for changed objectives and strategies that are put into practice through a process of technology-enhanced learning design. The larger cycle of organizational change comes through a process of design-based research where “insights from many different fields are converging to create a new science of learning that may transform educational practice” (*Meltzoff et al., 2009*).

MOOCs are the new proving ground for this organisational double-loop learning. They offer what was previously missing from an effective learning system: the ability to carry out research based on rapid cycles of learning design and analyses of large-scale data, leading to development of new theories of effective online education innovation, that inform further practice. As an example of the new science of learning in action, the FutureLearn platform (www.futurelearn.com) to support MOOCs from 50 partner institutions, is being developed by incremental Agile software methods (*Rubin, 2012*). Each two-week cycle of development includes a ‘pedagogy scrum’ that sets objectives to develop major educational functions for the platform and proposes how to re-conceive the underpinning theories for massive-scale online learning. Data from learner activities on each course is continually analysed and fed into the pedagogy scrum to improve functioning of the platform. The data also informs research into the emergence of a new pedagogy of massive online social learning, explored by a research network of FutureLearn partners.

This iterative pedagogy-informed process of learning design is far removed from the typical process of educational technology innovation in schools, universities or workplaces, where “if there’s any change it’s very slow. I don’t think the educational establishment has really embraced these ideas [of creative and collaborative learning]” (*Resnick, cited in TELRP, 2013*). The easiest and most commercially viable use of technology enhanced learning is for it to reinforce traditional education by providing more efficient methods of teaching, tracking and testing. The alternative – to challenge educational inequalities (GCP9) by devising new forms of technology enhanced learning that empower and emancipate – requires a “vivid network and community of practice” (GCP10) that coordinates research labs and schools capable of

enacting large scale, sustainable innovation. The network must itself adopt agile methods of research, implementation and dissemination, to experiment with new forms of learning for a digital world. The ultimate goal is a pan-European TEL network, similar in scope and ambition to those of particle physicists or climate scientists, which organises large-scale design research projects, provides an international forum to align efforts of thousands of learning technologists and educational practitioners, interprets findings from a wide variety of educational experiments within and beyond classrooms, and provides policy makers and education leaders with the best possible evidence of successful innovation.

The quest to improve education for all, enhanced by technology, is at least as important to society as finding the Higgs Boson and or investigating climate change. To coordinate this effort requires a shared vision and the collective exercise of ambition by researchers, practitioners and policy ma

Professor Mike Sharples



Mike Sharples (Biography: Mike Sharples) Mike Sharples is Emeritus Professor of Educational Technology in the Institute of Educational Technology at The Open University, UK and Honorary Visiting Professor at the Centre for Innovation in Higher Education, Anglia Ruskin University. His research involves human-centred design of new technologies and environments for learning. He inaugurated the mLearn conference series and was Founding President of the International Association for Mobile Learning. As Academic Lead for the FutureLearn company, he informed the design of its social learning approach. He is Academic Lead for the nQuire project with the BBC to develop a new platform for inquiry-led learning at scale. He founded the Innovating Pedagogy report series and is author of over 300 papers in the areas of educational technology, learning sciences, science education, human-centred design of personal technologies, artificial intelligence and cognitive science. His recent book is Practical Pedagogy: 40 New Ways to Teach and Learn, published by Routledge.

This article is an update of a chapter in this book:

Grand Challenge Problems in Technology-Enhanced Learning II: MOOCs and Beyond

Perspectives for Research, Practice, and Policy Making Developed at the Alpine Rendez-Vous in Villard-de-Lans

Editors: Eberle, J., Lund, K., Tchounikine, P., Fischer, F. (Eds.)

<https://www.springer.com/gp/book/9783319125619>

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Learning Loss and Catch Up... it's not that simple

Professor Bob Harrison



Image Credit: [Endri Killo on Unsplash](#) - open licence

In recent weeks there have been numerous mentions, reports and research studies about the impact of COVID-19 on young people's learning.

Many of them use the terms "Learning Loss" and "Catch Up" which are nice clichés but it's not that simple is it? Who has lost? What have they lost? Where has it gone? Have some lost more than others? How could that be? How might we know?

As far as I can see none of these questions have been addressed in sufficient detail to allow us to move on to consider the question of "Catch Up". The Institute for Fiscal Studies has called for a national policy response (<https://www.ifs.org.uk/publications/15291>), warning: "By the time the pandemic is over, most children across the UK will have missed over half a year of normal, in-person schooling. That's likely to be more than 5% of their entire time in school."

Without a "substantial policy response", it warns, "We will all be less productive, poorer, have less money to spend on public services, and we may be less happy and healthy as a result. We will probably also be more unequal, with all the social ills that come with it."

Responses like this, and there are many, are extremely concerning which makes it difficult to understand why the Government has chosen this time to cut the funding for pupil premium, its programme designed to support inclusion. The Guardian newspaper warns: "Urgent support must be targeted at disadvantaged pupils and schools in areas of high deprivation, researchers have said, as figures reveal the gap in England between some pupils and their wealthier peers widened by 46% in the school year severely disrupted by the coronavirus lockdown." (<https://www.theguardian.com/education/2020/sep/01/disadvantaged-and-bame-pupils-lost-more-learning-study-finds>)

Similar findings from the Education Policy Institute also support this (https://epi.org.uk/wp-content/uploads/2020/05/EPI-Policy-paper-Impact-of-Covid-19_docx.pdf). And of the course the Education Endowment Foundation, the DfE's go-to source for research and home of the Government's 'Catch Up Tsar', also backs up this suggestion (<https://educationendowmentfoundation.org.uk/news/eef-publishes-new-research-on-the-impact-of-covid-19-partial-school-closures/>).

Is Learning Loss real?

However, some educationists feel the concept of learning loss may be exaggerated, especially by organisations with a vested interest (they will probably be bidding for Government 'catch up' funds). Indeed, many suggest that some learners have gained during the lockdown period. It is generally accepted that nature has benefited from the lifting of the restrictions placed on it by human activities, as David Attenborough's acclaimed "The Year Earth Changed" documentary argues: "living in lockdown opened the door for nature to bounce back and thrive". So why not our children?

A recent study from the USA suggests that learning loss is a misleading concept. "Learning loss, in general, is a misnomer," says Katie McClarty, the vice president of research and design at the US company Renaissance. "Kids' scores are going up." For the most part, the gap between where students' scores are now and where Renaissance would estimate them to be in a "normal year" is shrinking. But, the company found that gap still exists (<https://www.edweek.org/leadership/learning-loss-in-general-is-a-misnomer-study-shows-kids-made-progress-during-covid-19/2021/04>).

Using past results, the researchers estimated how well students would have done on these tests had the pandemic not hit. Then, they compared this estimate to students' actual scores from this winter. The issue of complexity and starting point disadvantage also emerges: "The COVID-19 impact was greater for black, hispanic, and Native American students than for their white and Asian peers, and for English-language learners and students with disabilities."

The COVID-19 'Golden Generation'

Back here in the UK there are those who note a 'David Attenborough effect' in education. They believe the creativity, resilience and ingenuity this "golden generation" has already shown is comparable to the generation of children who lived through the hardship and trauma of World War 2. Educator Professor Stephen Heppell (<https://www.heppell.net/golden/default.html>) has a very clear and optimistic view about the "Golden Generation" who he addresses in the introduction to his Golden Generation Certificate offer:

"There is much talk about you needing to 'catch up' and of the things that some adults think that you have missed during this current pandemic. Yet you, your peers and your parents know that you have had many experiences (not all of them wonderful) that have been very different to the experiences you would have had, in conventional times, at school.

"It's not just you; the last huge worldwide disruption of children from many nations was World War 2. In the UK it faced children with everything from evacuation to underground shelters, bombing and rationing. Never mind the current lockdown for a few months - many children in WW2 were evacuated away from their families for years! But that disruption gave them much - resilience, ingenuity, responsibility, confidence, creativity, bits of unexpectedly deep knowledge, and more. The value of that is seen in that war-born generation... a very special generation who did things in rather non-standard ways, and who rebuilt the booming post-war world.

"Your new current Golden CoVID Generation exhibit that same ingenuity and resilience but it's not yet properly recognised. You need to know that you are also a very special, very valuable, wonderful generation. We haven't seen anything like you all for 75 years and we may not see it again for another 75 years."

So, irrespective of whether you feel learners have lost out, and undeniably some have, the issue is much more complex and nuanced than catch phrases of "loss" and "catch up". And the solution is much more complex than dishing out laptops to children, bunging a few million into the private tutor agencies or broadcasting talking head teachers.

The role of educational technology in the 'new normal'

What is clear is that technology has played a critical part in supporting teachers and learners – even though it has been hampered by the limited views and practices of Government - and it looks like it will play an ever increasing role in a “new normal” (yet another annoying cliché).

Several reports reaffirm that view. First, the “Shock to the System: lessons learned from COVID-19” report from Professor Rose Luckin at the Educate project at University College London with Cambridge Partnership for Education (<https://www.cambridge.org/partnership/insights/shock-system-lessons-learned-covid-19/>) makes a series of findings and recommendations about the need for investment in digital infrastructure, learning design but more importantly the development of the confidence, capability and capacity of the education workforce.

“Our key findings were that too little attention was given to the education ecosystem in its entirety and that effective connections are vital to supporting the education ecosystem,” says the Report, which comes with constructive and pertinent suggestions for policy.

Second, despite more than ten years of techno-scepticism at the heart of government policy, and the destruction and depletion of the support infrastructure for the use of technology to support teaching, learning and assessment, a recent UK Parliament report “Distance Learning” (<https://post.parliament.uk/research-briefings/post-pn-0639/>) offers pointers to a more coherent vision of how technology can be used to engage and empower learners and extend and enhance learning.

This report, from a wide range of respected academic researchers and professors, is a step change from the tired rhetoric of some education ministers of “taking back control” from the experts. Its key points are well worth consideration.

Finally, a very comprehensive report with a truly global view, has just been released by Unesco (<https://unesdoc.unesco.org/ark:/48223/pf0000377071>). It concludes: “If we are concerned to create educational practices that work towards the common good and towards sustainable futures, then, our first concern must be to attend to the causes of existing injustices, individualisation and unsustainability and to proceed from there.

It suggests that we need to learn lessons from the past and lays some suggestions for “‘non-stupid’ optimism about educational technologies”. These require “a recognition of what we have learned from the past, namely:

1. That digital technologies alone do not transform education;
2. That digital technologies do not improve learning;
3. That digital technologies do not fix inequalities;
4. That digital technologies do not alleviate teachers work;
5. That there are unintended consequences of digital technology use in education that are impossible to predict and that stretch far beyond matters of learning;
6. That any ‘impacts’ are context specific and tied with socio-technical factors.”

It’s essential that we gain a much deeper understanding of terms like “Learning Loss” and “Catch Up” and then perhaps a clearer idea of who might need to catch up (if, indeed, they do), why they need to catch up and what they need. Then let schools and colleges decide what will work best for their learners rather than top-down blanket approaches that may sound good as sound bites but too often do not work. Recent research about the impact of digital technologies gives us a really clear idea of what does and does not work.

Then we need a Government and an education minister committed to shaping a future vision and a strategy to implement it. Yes it's a big ask because this has been sadly missing for more than ten years.

If Professor Heppell is correct then perhaps the "Golden Generation" will be much better equipped to handle the next pandemic than this one. And it could be the way we acquire an education system fit for purpose.

Bob Harrison



Bob has extensive experience in schools and colleges as a teacher, lecturer, senior manager, Principal and Governor. He has worked with Head teachers and senior leaders in developing leadership skills for the National College of Teaching and Leadership, advised DfES on the FE Principals Qualification and was lead on Digital Futures for the Building Schools for the Future Leadership programme. Bob is also Chair of Governors at Northern College and Vice Chair of Governors at a Trafford school.

Bob is an Honorary Life member of CGLI for services to Vocational Education advisor and a Fellow of the RSA. He was Toshiba's Education and was also a member of the British Computer Society/Royal Academy of Engineering working group which redrafted the ICT National Curriculum.

Bob serves on many boards and advisory groups including the Ufi Trust, YMCA Training and Awards, the BIS FE and Skills Area based review advisory group. He is a Fellow of the Royal Society of Arts and is a judge for the BETT Awards and TES FE Awards. www.setuk.co.uk twitter @bobharrisonset

Practical EdTech Solutions

Teaching Through Technology – an American Experiment / a UK Partnership

Steve Moss



Anchorage Alaska : Image Credit, [Wikimedia Commons](#) - CC BY

A Short History

In 2004 I visited a newly established Charter School in Anchorage, Alaska – Highland Tech High – and had my first introduction to Real Project-Based Learning in action. I was in Anchorage to deliver a keynote address to the Alaska Society for Technology in Education (ASTE) annual conference. The then president of ASTE, Mark Standley, happened to be Principal of Highland Tech High. He and I had met by chance in Manchester twelve months earlier when he was a speaker at the National Association for Primary Education conference. An evening in the pubs of central Manchester turned us into lifelong friends and the invitation to Anchorage followed Mark's return visit to Manchester to run Digital Storytelling workshops in our City Learning Centres (CLCs).

This is by way of a preamble to the eye-opening visit to Highland Tech High. The school caters for 14–19-year-old students and, at the time, was pioneering a standards-based curriculum where small groups of students worked together on projects which allowed them to demonstrate achievement of standards in English, mathematics, science and technology. The projects were stimulated by real issues in the local and global community and the final assessments involved experts in the field from industry and the local university. Graduation was based on being able to demonstrate achievement of the required standards in whatever ways were appropriate to the projects' methodologies.

In 2005 Staff at Highland Tech High set up a not-for-profit organisation called Educating for Leadership (E4L) with the aim of helping students from under-served and under-represented groups to gain the skills and experience to take leadership roles within their communities. I joined the E4L board in 2011 and have been Vice-Chair since 2014.

Since the 1960s there have been nationwide programmes in the USA designed to provide support for 16–19-year-old students from under-served and under-represented communities to help them aspire to

and gain a university education. TRiO is the collective name for these programmes. The Upward Bound programme provides opportunities for participants to succeed in their precollege performance and ultimately in their higher education pursuits. Upward Bound serves high school students from low-income families and high school students from families in which neither parent holds a bachelor's degree.

In 2016, E4L collaborated with staff from University of Alaska Fairbanks (UAF) to develop and gain funding for a programme entitled "The Modern Blanket Toss" which worked with high school students in Native American communities in Alaska and used UAVs / drones to gather data to explore and propose solutions to community issues such as flooding and coastal erosion. As Dr John Monahan, the project director, explains: "We named this project after the Native tradition of the Blanket Toss, which enabled people to expand their horizons beyond their immediate surroundings. We wanted this project to do the same thing – literally, by giving students a bird's eye view of their communities, and figuratively, by exciting them about college and STEM careers." The programme was a significant success as evidenced by the final evaluation report (Mohanah 2016).

In 2017, building on the success of the project, a bid was submitted to the National Science Foundation (NSF) to develop a new technology-focussed curriculum – Teaching Through Technology (T3) – for high school students engaged in the Upward Bound programme. The bid produced a grant of \$2.7 million to expand the programme to 18 states outside Alaska. By the time of my visit to UAF in September 2019, the programme was in its third cohort and was working in 40 states.

The T3 Alliance team (www.t3alliance.org) in the USA focuses on training teaching staff from Upward Bound programmes in universities and colleges so that they can then implement the curriculum with their prospective students. The programme provides a replicable, adaptable, and scalable curriculum with a comprehensive support mechanism that can be widely adapted to increase the STEM engagement of high school students. The teaching staff go through all the processes that they will eventually have to introduce to their Upward Bound cohorts.

The T3 Alliance goal is to actively engage students, hold their interest, and empower their growth mindset to see the connection between the power of technology and using design thinking approaches to address a community engagement project of local importance. The project curriculum focuses on four elements that prepare students for STEM careers:

1. Technology instruction in programmable/codable Raspberry Pi, autonomous systems 3D printing, laser cutter MakerSpace, drones and others;
2. Skill development in science communication, leadership development, growth mindset, and design thinking, as well as STEM career knowledge;
3. Community engagement projects; and
4. A comprehensive network of training, communication, and support for college access professionals.

Growth Mindset

The growth mindset is the single most important predictor of how far a student will go in a STEM career field. Learning to reframe failures as learning opportunities is how students in the T3 Alliance can tackle the problems facing society. Growth and fixed mindsets are states of mind that relate to a learner's perception of how abilities and skill sets are acquired. An individual with a growth mindset tends to see challenges as opportunities for learning something new, while an individual with a fixed mindset tends to see a challenge as a threat to be avoided. Students in the T3 Alliance learn to recognise and utilise behaviours and patterns of speech that support the development of a growth mindset. Students who have a growth mindset feel safe

enough to take risks and have the confidence that they will learn from their mistakes.

Playing + Learning

Learning happens easily in STEM fields when an individual feels safe enough to play. Play requires an absorption in the activity or equipment that leads to a familiarity and skill level that can later be used for a specific purpose. In the T3 Alliance, time is allocated for students to play with technology and engage in healthy competitions that make learning fun.

Communication Skills

Communication skills are essential for any community engagement project and are introduced and practised in the T3 Alliance on an “as needed” basis. Whenever a grant proposal needs to be written, a short video created, a website built, or a public presentation delivered there are specific tips and techniques that should be considered.

Emerging Technologies with STEM Curriculum

The T3 Alliance curriculum actively engages students, holds their interest, and empowers their growth mindset. Technologies that have been incorporated in the T3 online curriculum as well as training and on-going programmes include:

- Starts with the basics of Raspberry Pi computer coding
- 3D printing
- Autonomous systems
- LaserCutter MakerSpace
- Culinary Arts
- HeartMath Social Emotional Learning
- Drones
- Ongoing course development

T3 Alliance is a resource that includes curriculum and training using low-cost, replicable materials to ensure instructional success, even when implemented with non-STEM professionals.

Community Engagement through Design Thinking

Students use their new skills to help their communities with a need through the process of Design Thinking. The program allows students to find the connection between the power of technology and using design thinking approaches to address a community engagement project of local importance. T3 expands instruction (STEM skills and programming) to transferable skills (Growth Mindset) and a structured process (Design Thinking) to give back to their communities with newly acquired skills using a process that has proved successful.

T3 Alliance in the UK

In 2019 Naace began discussions with the T3 team in the USA about adopting and adapting the T3 Alliance programme for schools in the UK. A memorandum of understanding between the two organisations was signed in January 2021. The Naace team, led by Gavin Hawkins, started the search for a group of schools which were dedicated to supporting underserved communities and those under-represented in higher education, and which had a strong focus on STEM subjects. Ormiston Academy Trust (OAT) was approached and responded enthusiastically to the opportunities which the T3 programme provided for their staff and students. An initial cohort of 3 teachers from 3 OAT schools undertook the training in January 2021. This was provided live online by experienced T3 Alliance trainers from the USA programme. The evaluation

responses were very positive and the teachers indicated strong intentions to roll out the curriculum to groups of students.

Gavin Hawkins, Naace Board of Management writes:

OAT have opted to undertake a pilot programme within three of their schools with a view to making this more widely available to other schools within the Trust from September. The view of the Trust is to include this within the STEM curriculum at Key Stage 3 rather than as an extra-curricular activity.

“In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment.” (Dweck, 2015)

OAT have made a conscious decision to include elements of the T3 programme within their Key Stage 3 programme to provide real-life context for curriculum. The activity of building the Pi Computer, within its wooden box, by following instructions, working within a group and solving problems, is at the core of the growth mindset philosophy and provides students with an understanding of the challenges that individuals face when presented with problems and need to take risks to solve them.

Following the “Box-Build”, students begin a programme of study relating to the fundamentals of the Raspberry Pi:

Figure 1.

Week 1: Intro & box build	<i>Introduction to T3 and the program & Practical: Build the Piper computer</i>
Week 2: Components & Node Red	<i>What are a computer's key components, what is a Raspberry Pi & its capability (academic info), Programming session 1 – Node Red intro and getting started with buttons and lights</i>
Week 3: Programming intro	<i>Raspberry Pi – Node Red, take a selfie and fundamentals of digital storytelling</i>
Week 4: Design Thinking	<i>Programming the BME 280 sensor Design Thinking session – Info on the design process, Wallet design activity, working with partners and listening with empathy, mini grants</i>
Week 5: Presentation/ Prototyping	<i>Prototyping and Testing: Presentation on group findings, generating a final design response (sketches, links to code / components required and how they plan to use them, CAD design model</i>
Week 6: Showcase	<i>Raspberry Pi / Node Red fully programmed prototype solution – possibly supported by DT in manufacturing a working model.</i>

The Trust feel that this introduction to the T3 programme provides the students with a grounding in the potential of the Raspberry Pi and the programming application of Node Red. Opportunities for exploring additional components and sensors are introduced at appropriate points during the programme, but students are very much encouraged to explore these as they undertake specific challenges.

Trust-Wide Plans

It is the intention to roll the programme out across the whole Trust (some 30+ schools) during the next academic year. Schools will be encouraged to develop a STEM programme which includes a rotation between Project Pi, Food Technology and Design Technology. The Project Pi rotation will include aspects of growth mindset and design thinking to approach projects such as “Renewable Energy” and “Potable Water”.

The Trust are making sure to include community action projects and citizen science investigations within their Project Pi programmes. This will provide the contextual focus that the Trust have been keen to include within their STEM curriculum.

Looking further ahead, the Trust already host a STEM Fest event in April each year, where groups of students are encouraged to enter teams to solve a range of problems and present their findings. It is the intention of the Trust next year to include a Project Pi challenge with the winners potentially joining with T3 students in the US later in the year, to work on joint collaborative projects.

Adapting T3 for UK Schools

One of the most interesting outcomes of the pilot project with OAT, has been their decision to adapt the T3 curriculum to make it appropriate for much younger students. This has generated real interest from the students involved, with long waiting lists of students wishing to take part in the pilot.

In a recent visit to Ormiston Bushfield Academy, we met with staff and a representative group of Year 7 students, who were able to speak with enthusiasm and confidence about the skills they had learnt, the challenges they needed to overcome and the projects they were currently engaged in.

All the students had been set a problem to address which required them to use the Raspberry Pi, the Node Red software and a range of sensors. The students worked within groups to consider the problem, then design a solution, prototype and model and then present their findings to the wider group. It was clear to us that, even after a very short period of time working in this way, the students had developed sophisticated thinking and problem-solving skills, which would have been difficult to develop without the need to solve a real-life context.

Interesting next steps for Naace and T3, working together, may well be to design challenges and curricula which show progression from Key Stage 3 (and possibly younger) to post-16 students, working in partnership with universities and external providers. It is clear from this initial pilot that the curriculum engages and challenges students of all ages and has great potential to provide students with skills and activities which are progressive, relevant and impactful.

One challenge faced by the Naace organisers was to replicate the T3 kit as provided to participants in the USA. In this they were fortunate to be given a contact in senior management at OKDo (the largest worldwide distributor of Raspberry Pi products). The team at OKDo worked with Naace and with E4L in the USA to specify and source the appropriate components for the UK at a cost which makes the programme accessible to as many schools as possible. There was a reciprocal benefit for the USA programme as OKDo were able to reduce the cost of kits there via their local distributor.

Where next?

It would be ideal if the Naace / T3 Alliance pilot programme were to be picked up by UK universities as part of their Widening Participation activities, thus echoing the way that the programme runs so successfully in over 30 universities and colleges in the USA and its territories, from Puerto Rico to the Marshall Islands. Any UK university or school wishing to explore this possibility should contact Gavin Hawkins at Naace (gavin.hawkins@naace.org.uk) or the USA programme administrator Roxanne Mourant (roxy@t3alliance.org).

Reference

Mohanani J. 2016 <https://www.yumpu.com/en/document/read/56604890/modern-blanket-toss-findings-and-observations>

Steve Moss



Steve was Chair of the Board of Management of Naace – The Education Technology Association in 1998 and again from 2017-2019. He is Vice-Chair of the board of Educating for Leadership (E4L), a USA-based not-for-profit that works with schools in underserved and under-represented communities.

From 2014-2021 Steve was Chair of the Innovation Forum of EN(ni) - Education Network Northern Ireland - which brings together public and private sector stakeholders to plan the further development and effective use of the Wide Area Network and associated services that link all schools in the province.

He has consulted internationally on the implementation of 1:1 device programmes in education, most recently in Alaska and Hawaii, and was an invited speaker on Mobile Learning at the Open Innovation Forum in Moscow in November 2014.

He has also supported education ministries and individual schools with technology programmes in Jordan, Hong Kong, Sweden, USA, Russia and Australia.

Early Years Education in Bangladesh: Rohingya Children

What are MESHGuides?

Stephen Hall, Staffordshire University

Jonathan Doherty, Leeds Trinity University

Sarah Younie, De Montfort University



HOME A TO Z



MESH is about the global vision to provide a research evidence-base to inform teaching, with researchers and teachers collaborating to write MESH GUIDES which provide summaries of research to inform classroom practice. Indeed they are a vital tool for knowledge exchange.

Another way of describing MESHguides is as an overview of a particular topic or research area contained in one site, written for readers who require clear, concise, non-jargon explanations, which signposts them to further resources and websites so that they can develop knowledge. These neutral Guides, although written with expert knowledge, are user-friendly short reads with the audience in mind, not the writer.

The value of these Guides is as a digital repository of current expertise on a given area of research. From the teachers' point of view a complex area of academic work is condensed and presented in an accessible way to a diverse readership. The international nature of the organisation means that a breadth of subjects is covered and often different approaches to the same subject in different countries can help our understanding of teaching and learning in context.

Who are the MESH educators?

MESH is a worldwide network of educators who are working voluntarily, to share, freely, research-based knowledge with teachers, parents, policy makers and research funders. The key outputs of the network are MESHGuides published in a free research-based online resource bank that is accessed in 193 of the 196 countries in the world. As a result of MESHGuides' involvement in key sustainability projects in developing countries, MESHGuides and its parent charitable organisation, Education Futures Collaboration (EFC) were nominated for the internationally recognised and prestigious YIDAN Prize. MESH has most recently been invited to work with the International Task Force on Teachers for Education 2030. The programme relates

to the United Nations Sustainable Development Goal of all children everywhere having access to high quality education.

Recommendations for the use of ECEE MESHGuide

Research data to date has demonstrated that the Early Childhood Education in Emergencies (ECEE) MESHGuide has potential both nationally and internationally (Laxton, Cooper, Shrestha & Younie 2020). But the recommendations indicate that several features need to be developed further to ensure the effectiveness of the guide and its impact on training and subsequent learning experiences within tented homes. The ECEE MESHGuide has been recognised as beneficial as a starting point, but there are greater opportunities that are not being realised from the online repository itself. A scaled down version of the ECEE MESHGuide is required that better promotes effective translational research to all trainers. This will include a more dynamic interface that meets the evolving needs of a range of global communities working to enhance learning opportunities for very young children in crisis settings, such as a refugee community or global pandemic. In the case of the latter and the global coronavirus pandemic for example, countries are suddenly home-schooling and need access to research-informed education resources using the Internet.

The MESH Early Years team (researchers and educators) are working on a new enhanced global guide, which will include less detailed documentation and more practical ideas and resources, video clips and texts. Most significantly, materials need to be easily translatable to home languages relevant to specific contexts and countries. Further practical ideas for sustainable, locally made low/no cost resources need to be provided that are context specific, so that volunteers can develop banks of play materials to enhance activities and stimulate children to enjoy learning through play and be encouraged to engage in sustained, shared thinking. The collaboration with VSO needs to continue to support such developments; experts working in the field have much to offer and ensure work by MESH is relevant and accessible. Continued use of MESH mapping will allow for easy accessibility to the relevant information in any redesign.

Creation and Translation of a Trainer Booklet

The translation of texts and videos into home languages spoken by communities is of key importance in enabling volunteer educators access to a wider range of knowledge and understanding. The family booklet needs to be translated accordingly and uploaded to devices that mothers/big sisters have access to, as well as being provided with a hard copy to own. In order to better prepare national volunteers, it is recommended that MESH and VSO collaborate to create a 'Trainer Booklet' that has more information on topics included in the family booklet and subsequently greater scope for sharing knowledge, understanding and effective/good practice in early childhood education and development.

VSO School Mobile Application

The mobile application appears to have potential benefits to supplement the training and engage children in the home learning spaces. Trainers were excited by the technology and it is suggested that children will have similar positive attitudes. With the development of the ECEE MESHGuide outlined above, it should be easier to transfer activities and clips across to the application. Partnership with VSO again is critical to the verification of appropriate resources for use in crisis settings and providing continuous feedback to MESH colleagues. Video footage of effective pedagogic practice in home learning environments captured by VSO can enable a two way process of sharing resources. These clips can be uploaded to the newly created ECEE MESHGuide for access by all.

The Rohingya Case Study

To illustrate the power of the model, in this article we are describing the value of MESHGuides in supporting Rohingya refugee children.



Rohingya refugees, Bangladesh: Image Credit: [EU Civil Protection and Humanitarian Aid CC BY ND](#)

The Voluntary Service Overseas

In the Rohingya model MESH is working closely with the international charity VSO (Voluntary Service Overseas) to produce a MESHGuide on Early Childhood Care and Education (ECCE) to support 'Education in Emergencies'. This Guide provides practical guidance, informed by research, for teachers/volunteer aid workers/parents and siblings to address UN Sustainable Development Goal 4.2., which emphasises the importance of early childhood development in preparing all girls and boys for primary education.

In this specific case thousands of Rohingya refugee children have been living in camps in Bangladesh. Very young children have experienced violence and ongoing trauma and still lack safe spaces to learn and play. Working in partnership with the VSO, the Early Childhood MESHGuide, an online knowledge map focusing on the learning of very young children, has been developed by volunteer educators from ten countries working online with local people and VSO volunteers in refugee camps. This provides a rapid response to a critical need for families and children missing education at an influential time and who urgently need interventions and learning support. The turnaround time from identification of a problem to publication of the Early Childhood MESHGuide was within a matter of weeks.

Child's Voice

Eighteen Rohingya children took part in three focus group discussions and children were observed during sessions in the home learning environments, however, their voice has not been heard in evaluations. Going

forward, greater emphasis should be placed on the thoughts and perceptions of the child and these should be more evident in project evaluations. This is in line with Article 12 of the United Nations Convention on the Rights of the Child, which states that all children with the capacity to form views have ‘the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child’ (United Nations,1989, p.5).

Curriculum Framework and Assessment Tool

To improve the delivery of early childhood education, it would be pertinent to design a clear and simple, user-friendly curriculum framework. This would set out a standard of expectations for mothers/big sisters and ensure children learn and develop appropriately in the context and have the skills to transition to school. Developing an effective assessment tool will allow for progress to be monitored from baseline onwards and would allow organisations such as the VSO to evaluate areas of their work more effectively and recognise impact even more reliably. This early intervention project has enabled educators to set a minimum standard that is achievable in a crisis setting, with little or no resources, and begin a learning programme for refugee children. From here, a plan to enhance and improve education provision can be made. This project has been significant in moving from zero to a baseline start; young refugee children can now engage in some structured learning, promoting SDG4 and SDG 5.

United Kingdom Developments

As discussed, the current ECEE MESHGuide is more appropriate for the English-speaking global North and the guide needs to be reviewed and relabelled in light of this. It is recommended that this page is separate to the ECEE MESHGuide but both pages carry clear signposting, so users can access both as appropriate to individual and context need. Further analysis of the google analytics data is required, along with a data collection exercise with the Early Years workforce within the UK, to ensure changes made meet needs appropriately. This data will enable improvements of page signposting and content and could lead to a suite of Early Years MESHGuides being developed that allow ease of access for a diverse group of stakeholders from different countries and contexts. Initially, a focus to support and improve translational research within Bangladesh and England is planned. Such developments are likely to allow wider accessibility and a global use increase.

Snapshot: Early Years Education in Bangladesh: Rohingya Children



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.

What about the children of the Rohingya?

VSO MESHGuide on ECCE (Early Childhood Care and Education), for ‘Education in Emergencies’ – providing research summaries and practical guidance for teachers/volunteer aid workers/parents and siblings to address UN SDG4c

Background information:

Thousands of Rohingya refugee children are living in camps in Bangladesh. Very young children have experienced violence and ongoing trauma and still lack safe spaces to learn and play. Working in partnership with the International VSO (Voluntary Service Overseas), a MESHGuide (online knowledge map) focused on supporting the learning of very young children has been written and rolled out for use with VSO volunteers in refugee camps. The MESHGuide for teacher and parent volunteers has been developed for use as a home-based early childhood care and education (ECCE) in emergencies programme working with children aged 3-5 years. Parents and older siblings have joined in.



Context:

This is a rapid response to an obvious need for children and families missing education at an influential time and urgently need interventions and learning support (the turnaround time from identification of problem to publication of the ECCE MESHGuide was within a matter of weeks).

Although responding to a specific need in Bangladesh, this project has a universal context, directly relevant in emergency settings and conditions of poverty and where parents are not early years teachers. In that respect it is:- Immediately transferable and relevant to anyone with contact with children in similar circumstances Indirectly transferable to other settings and context in other countries, including the UK, where there are high levels of unemployment, poverty and both social and emotional trauma for children

Raising awareness of the potential of forgotten or previously untapped resources such as home-based inter-generational learning, older siblings as teachers/facilitators etc

Quote from a grandmother - "I've learnt so much about aspects of education I haven't thought of before and about how to help the learning of my grandchildren."

Quotes from practitioners "Having access to up-to-date teaching and research material on the MESHGuides website has changed the way that I plan and prepare my teaching." "MESHGuides give me immediate and free access to valuable and relevant teaching and learning materials."

The project should also remind educationalists with more stable and developed education systems that so much good practice that has developed in primary education has a foundation in early years and special needs education.

Relevant area(s) of research/education:

Early childhood studies; cognitive development; social and emotional development; children in poverty; attachment theory; working with parents; inter-generational learning; displacement; attachment theory, home education; self-organised learning; helping communities/families/individuals to help themselves; self-help groups;

Keywords:

Conditions for learning, early childhood care and education (ECCE), cognitive development, emotional stability and well-being, trauma and mental health, language development, social and emotional skills, refugee/early childhood development training, parental involvement, home education, self-organised learning, social capital

Outcomes:

1. Skill development for children, parents and practitioners:-

Necessity is the mother of invention. The reactive and immediate nature of the problem facing the Rohingya children required a speedy but effective response and solution. As a result, a range of inexpensive, easily sourced materials were used by VSO volunteers within the refugee camps in Bangladesh for creating bamboo blocks for block-building and problem-solving activities which develop the following skills:-

(i) Physical skills: Hand-Eye Coordination, Gross Motor Skills, Fine Motor Skills.

(ii) Cognitive skills: Understanding the world -- there is no better way for the children to gain an understanding of the world around them than by letting them build forms and objects in the world around them, Shape recognition,

Imagination, Problem solving – the children develop essential critical thinking skills to build structures and solve problems.

(iii) Emotional skills: Resilience, Social interaction, Self-esteem.

2. Collaborative working to solve problems modelled to families, communities and practitioners:-

MESH and VSO have modelled collaborative working to create an open-source guide for people working in young children's education in extremely challenging contexts. This is a practical resource with transformative potential within a transferable format. This guide is open to everyone, worldwide, to download and use wherever needed. In Bangladesh, expert international and national volunteers deliver the programme on the ground in the camps, where needed, alongside Rohingya community volunteers. Translated into the local language, the guide teaches through songs and stories to help young children in crisis understand the world around them. It supports their emotional development and helps them grasp early literacy and numeracy. This is so important if a whole generation is not to lose access education.

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 into families and communities as well as formal centres for learning

Rapid response to an identified need – this has positive implications for individual schools, networks and MATs seeking to find evidence-based solutions to perceived need

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

Anyone involved in this project, by thinking about how we meet the needs of early years, gain a benefit from looking at learning from a different pair of eyes

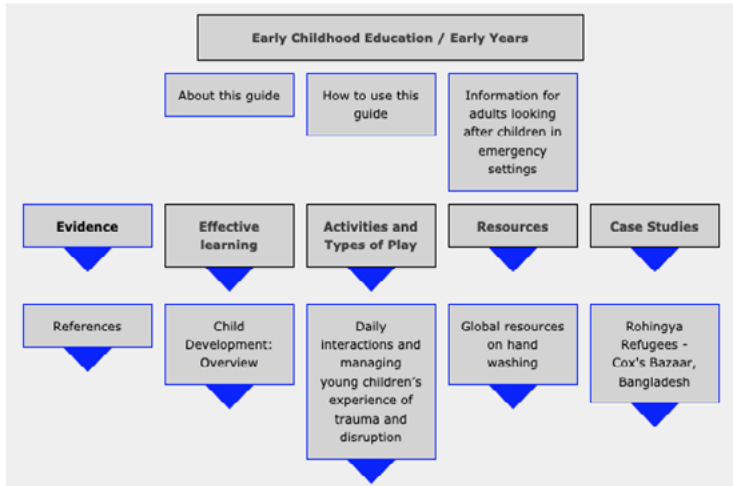
We get so absorbed in our own practice, when you look at practice in a different setting, it opens your thinking

Other linked MESHGuides:

Deaf Education:- Glue Ear, Early Support for Deaf Children 0-5, Auditory Processing Difficulties, Radio Aids

Early Childhood Education / Early Years

Debra Laxton and Marilyn Leask with inputs from the MESH Early Years Editorial Board | 1



MESHGuide extract: ECCE (Early Childhood Care and Education) - <http://meshguides.org/guides/node/1343>

This Snapshot document will shortly be brought alive as an online version with video clips on the MESHGuides website

Naace members can apply to MESHguides for support in writing a snapshot of work they are engaged in.

Authors

Johnathan Docherty



My background is in teacher education, encompassing Early Childhood Education and Primary Education. My already completed, and planned future MESHGuides are linked to my research interests: pedagogy & curriculum; teachers' professional learning and school development. My role in MESHGuides is as an Executive Board member: MESH Guide development and new business. Primary education liaison.

Stephen Hall



Stephen is a Senior Lecturer in Education at Staffordshire University and a Senior Fellow of the Higher Education Academy. He is a Trustee of Education Futures Collaboration, (EFC/MESH) and an advocate of its MESHGuides project, which provides research-based evidence to inform teachers' professional practice in 196 countries around the world. A practitioner himself at heart, he has taught and held leadership roles in secondary, middle and primary schools in the UK and was previously headteacher of Cooper Perry Primary School for 18 years, during which time the school was part of the Building Schools for the Future programme and gained the International School Award and recognition from Ofsted for its influential international links with schools in many other countries. He has had experience as an Ofsted Inspector, a local education authority inspector/advisor and has delivered leadership programmes for NCSL, BECTA and SSAT, including the Strategic Leadership of ICT (SLCT) programme nationally to headteachers and senior leaders. He is an innovator and advocate of personalising learning and learner empowerment and has experience of working with schools in many countries including Europe, USA and Canada, Australia and sub-Saharan Africa. He has also worked with self-help groups in Ethiopia, in association with Tearfund, under the MSc Transformation in the Workplace programme which he led for Staffordshire University. His blog is titled 'Doing Education Differently' which sums up his innovative approach to educational leadership and classroom practice at all levels.

Sarah Younie



Sarah Younie is Professor of Education Innovation in the School of Applied Social Science at De Montfort University. She teaches on the MA and BA programmes and supervises PhD research students in educational knowledge management, technology, innovation, pedagogy, professional development and management of change. Sarah has a PhD in Education and Technology. Her teaching and research focuses on change in education, in particular technology and the opportunities it affords for innovation in practice. She is the co-founder of the 'Education Futures Collaboration' charity and MESH (Mapping Education Specialist knowHow) project, which is a translational research initiative that provides evidence to inform teachers' professional practice. Sarah has implemented international research projects, including the EU funded 'Learning School' project, part of European Schoolnet Multimedia project, supported by 23 Ministries of Education; the 'Web@Classroom' project, awarded 'ICT Best Practice in European Education' in recognition of innovation. Other international projects have included the EU funded 'European Knowledge Center' project, and currently, the EU 'Building a Research Infrastructure for School Teachers' project. Sarah is widely published and is an editor for the 'Learning to Teach' book series. She is also Editor-in-Chief for the international Journal of 'Technology, Pedagogy and Education

References

Laxton, D., Cooper, L., Shrestha, P., & Younie, S. (2020). *Translational research to support early childhood education in crisis settings: a case study of collaborative working with Rohingya refugees in Cox's Bazar*. *Education 3-13, International Journal of Primary, Elementary & Early Years Education*, 1-19.

Inclusion through technology with Universal Design for Learning

John Galloway



Example of Universal Design. Image Credit: Brisbane City Council. CC BY

We have all experienced Universal Design, but probably not noticed it, nor thought of it as such. At its best it disappears from our consciousness into the background and we accept it as simply how things are.

The concept first appeared in architecture and design in the 1960s as an intention to remove as many barriers from the built environment as possible in order to improve access for all. The most famous example is the dropped kerb, initially designed to help wheelchair users to cross roads, but we know that people pushing buggies, pulling suitcases or riding bikes also appreciate them. The nobbled surface of them helps people with visual impairments know that the edge of the pavement is near – they can feel it with their feet if they can't see it clearly. It also makes the pavement less slippery in winter.

You'll have come across it in lifts where the buttons are positioned so wheelchair users can reach them, or in classrooms with the height of the light switches, and in hospitals where medical staff wear name badges in a large font with high contrast lettering.

Essentially, the principles are to think about the intended learning goals, and then to provide multiple means of engagement, representation, and action and expression, all facets of teaching and learning that we know technology is ideal for.

CAST have created a visual framework to help us understand the principles:

Universal Design for Learning Guidelines



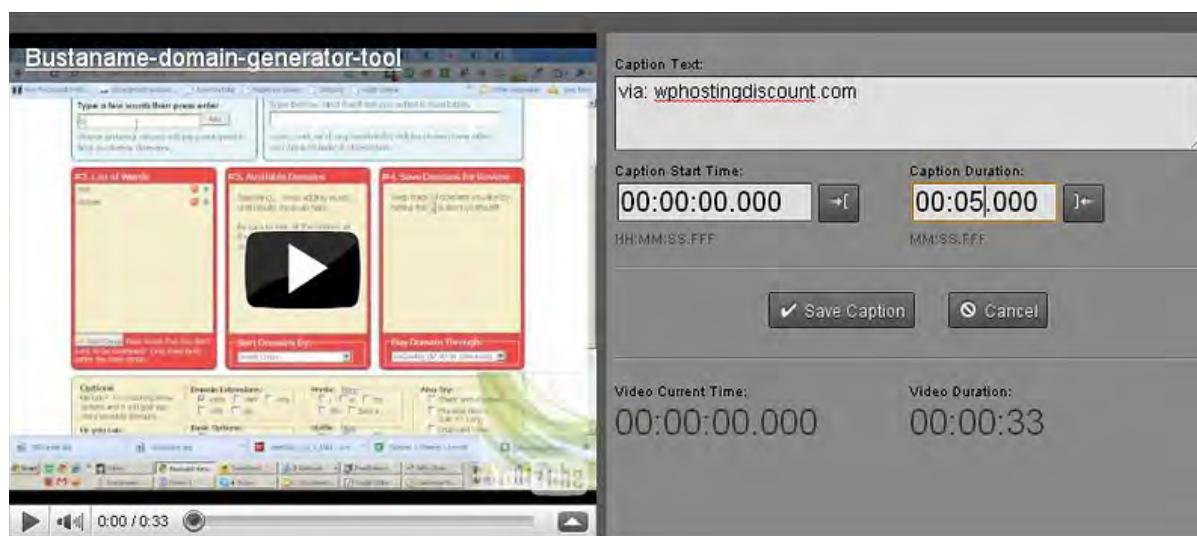
Link to Interactive Table of UDL guidelines <https://udlguidelines.cast.org>

With multiple means of engagement it is not only the way that materials are presented to learners that matter, but also how and when. Some may prefer to hear a text rather than read it themselves, or to watch a video or a re-enactment. Similarly they may prefer studying in short blasts to sustained blocks. Or they might like to do some background study first rather than jumping straight in. It also means having different starting points, perhaps approaching history from the perspective of the impact of world events on common people rather than the global, geo-political forces. The learning goal may remain the same, understanding significant events in the past, but the starting point and the route to getting there can be different for each learner.



Universal Design, Airport Signage - Image Credit: [Lauren Manning](#). CC BY

Then there is the format of the information provided; its representation. At one level it can mean using larger fonts and wider line spacing on handouts, at another it is providing subtitles for videos. This latter has become much easier since the introduction of automatic subtitling on Youtube, or in PowerPoint. Whilst it isn't completely reliable, it provides an option, one that not only those with hearing impairments, or who are new to a language, will make use of. Using both aural and visual channels simultaneously to convey information can offer immediate reinforcement and enhanced understanding, but not for everyone. So some pupils may choose just to watch, or to listen. Similarly providing a transcript of videos means that content can be approached without distracting visuals, reinforced through a different sensory channel, or even studied at different times and places, such as on the bus when you can't watch a screen. The different ways in which we can engage with information, by watching it, hearing it or reading it, can be easily mediated by the technology we have to hand.



Tool for subtitling YouTube videos - Image Credit: [Harsh Argawal](#) CC BY

Likewise it enables various means of action and expression, not just through the use of assistive technology (AT). Certainly the functionality built into every device, to allow us to dictate a piece of text rather than type it, enhances UDL. Learners with learning barriers such as dyslexia, or those whose physical disabilities which make it difficult to use a keyboard, can put aside the need to remember spellings or depress keys and get on with showing us what they know and think. But it also offers the possibility of using different media altogether, perhaps making a video, filming a presentation, creating an animation, or recording a podcast, all answering the same question, and serving the same purpose, but offering the opportunity to respond in a learner selected way.

It is that capacity for choice that is the essence of UDL. Giving learners the opportunity to decide for themselves how to engage, how to receive content, and how to respond, offers independence and control, and thereby allows them to become more involved participants in their own learning.

For teachers it raises new challenges, not only in embracing the principles of UDL and seeking to remove barriers in order to improve learning, but also in helping learners to make the best of those opportunities. We need not only to help them to understand themselves as learners, and thereby set their own paths, but also to teach them to use technology in all its various ways so that they can make effective, well-informed, choices.

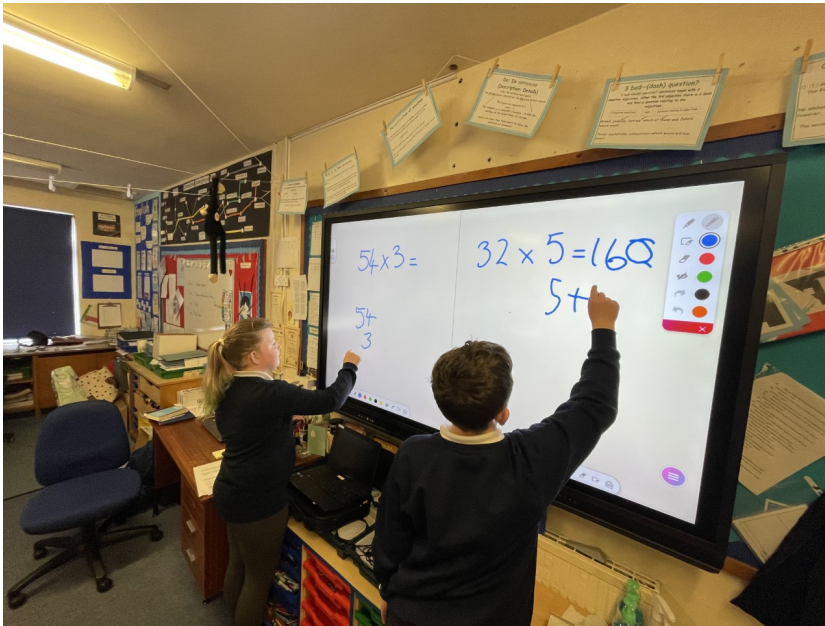
John Galloway



John is a specialist in the use of technology to support the inclusion of children and young people with special educational needs and disabilities (SEND) in the curriculum. His work covers all phases of schools and learners with a very broad range of SEND. Along with providing advice

Managing the classroom-home hybrid continuum

Dr John Collick, Promethean



Promethean ActivPanel: Image Credit: Spire Junior School

While the initial implementation of home-learning programmes was initiated in response to ever-evolving education sector requirements with little time to prepare, there has since been the opportunity to evaluate how best to support students when they are learning away from the classroom. Dr John Collick, Head of International Education Strategy at Promethean®, discusses some of the key findings from the experience of how a school in Derbyshire has put this theory into practice...

Digital divide and educational inequity have been words on everyone's lips having seen the shortage of personal devices, poor internet connectivity, lack of bandwidth and cost of data, all contributing to students struggling to access learning materials remotely.

While the UK and Ireland have all but removed the restrictions associated with lockdowns, it has drastically impacted the way teachers prepare for lessons and conduct delivery. For example self-isolation, shielding and sickness all impact a school's attendance levels for both teachers and students.

With that in mind, the education sector is somewhere on a continuum which swings between all students learning from home, all learning in the classroom, and somewhere in between. As such, the most significant learning in recent times is the role that hybrid learning has to play in supporting schools in seamlessly moving along this continuum.

So, what should the priorities be and how can schools achieve educational continuity in the face of uncertainty?

Structure socially driven lessons

Education is fundamentally a social experience and people, by their very nature, are social beings. If learning takes place away from the classroom environment, the social aspect of learning is also removed. So, when implementing a hybrid learning strategy, building in a social element is crucial.

One of the easiest, yet high impact ways to do this is to focus on familiarity and authenticity. This can be as simple as the student's usual teacher recording a lesson in the normal school setting – even if the classroom

is empty it will still be an effective psychological trigger for learning.

Trust in technology

It has become increasingly apparent that schools do not have the budget to rapidly implement distance learning platforms, and teachers do not have the time to learn how to use these effectively. Lessons from previous lockdowns have shown that leveraging existing technologies can support schools to operate on the classroom-home hybrid continuum, with the familiarity helping to ease stress levels and workload. By adopting a digital-first approach with established technologies, teachers can easily repurpose learning materials for use at home.

For example, a front of class display like the Promethean ActivPanel®, acts as a hub of interactivity, used to promote participation and encourage engagement within the classroom.

Using accompanying lesson delivery software, ActivInspire®, teachers can develop creative and dynamic flipchart lessons. These resources will also support teachers in re-engaging students as they adjust to learning back in the classroom. Crucially, these same resources can also be used to support students learning from home – without impacting teacher workload to produce duplicate content.

Putting the theory to the test...

Technology has formed the backbone of the UK's response to maintaining communication between schools and students over the course of the last academic year and into this one. Demonstrating how it quickly mobilised a digital first response to lockdown learning, Spire Junior School had technology and wellbeing on the top of its list of priorities.

With an ethos of improving student outcomes and transforming learning opportunities, Spire Junior School's approach to curriculum delivery is driven by innovation, positivity and technology.

With vibrant classrooms that are environments that bolster student participation and the discussion of ideas, the absence of this social element as a result of the pandemic posed a risk to student wellbeing. To navigate these challenges, Spire Junior School made it its mission to support regular communication between students. Organising Zoom meetings for students to chat to each other and school assemblies that helped to boost morale, the school encouraged conversation, involvement and visibility between students and teachers. With Through the Keyhole - style tours of classrooms and getting teachers to take part in Bushtucker Trials, students and teachers were made to feel involved in school-wide activities despite the physical distance between them.

Keeping technology at the heart of lesson delivery, Assistant Head and Year 6 Teacher, Alex Bramley explains how he maintained interactivity through a digitally focused approach.

“Our Promethean ActivPanel is the connected hub of the classroom, and although unable to use my ActivPanel to the level we were used to, the ActivPanel and accompanying technology formed an integral part of our distance learning strategy. If I was in the classroom, I would record myself on my phone delivering a lesson using the technology. If I was at home, I was able to use Promethean's lesson delivery software, ActivInspire, to deliver lessons digitally. Using my prepared lesson content, I saved valuable time in the hybrid process and as a result, students were presented with tools they recognised. The platform also has a screen recording functionality, which established the grounds of my teaching methods. Using ActivInspire Screen Recorder, I was able to record my screen and talk students through the key learning points of the lesson as I would usually do in the classroom,” Alex said.

Engagement has naturally been an issue for students when learning away from the classroom, but Spire

Junior School has continued to innovate and inspire students wherever they are.

Concerned about students spending a lot of time on digital devices, whether that be for educational or enjoyment purposes, Spire Junior School encouraged distance between screens and promoted daily exercise, using educational driven tasks.

Such tasks included Alex's own innovative idea, 'Lamppost Orienteering', that took students out in the fresh air to fulfil curriculum requirements, such as number recognition, problem solving, maths, map reading skills and coding.

"'Lamppost Orienteering' was created by taking a screengrab of a map, which detailed the local area around the school. I then walked the area and selected a series of lampposts and their corresponding numbers to use, before lacing dots on the map and recording the codes for the answer sheet. These were then shared with the students to go and find the correct answers and codes. This not only helped students to bolster their coding and number skills, but also gave them a new and interesting task to participate in whilst also getting outside in the fresh air.

"Innovation and creating interesting tasks are fundamental parts of my job as a teacher. With students back in the classroom full time, I am looking forward to embracing technology even further and continuing to drive engagement through positive attitudes and exciting lesson delivery," concluded Alex.

The education space remains on the home-learning continuum and schools are becoming more equipped with the technology to seamlessly navigate any challenges that come their way. By adopting a digital first approach, using resources to hand and encouraging teacher confidence can help to deliver maximum positive impact with the smallest of time investments.

The Promethean ActivPanel has been supporting schools across the UKI region to make the most of their tools and keep communication going between teachers and students. To find out more, request a virtual demonstration here: <https://www.prometheanworld.com/gb/how-to-buy/request-a-demo/>

https://drive.google.com/drive/folders/1qsqdDUFunwDigjNMm_VNRq7f_Xhd7I1m?usp=sharing

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Dr John Collick



Dr John Collick has worked on the implementation of technology at a strategic level for governments, international organisations and global corporations for twenty-five years. He is an internationally renowned speaker on the themes of assessment, classroom practice and the societal, ethical and philosophical implications of information and data-systems on the learning process.

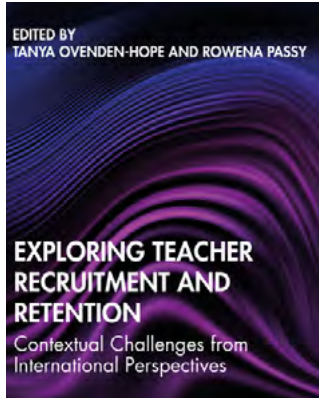
Book reviews

Exploring Teacher Recruitment and Retention: contextual challenges from international perspectives. Oxford, Routledge

Tanya Ovenden-Hope and Rowena Passy (Eds) (2020)

Review by James O'Meara, Dean College of Education, Texas A&M International University,

Summary



In summary, Exploring Teacher Retention and Recruitment is written by experts in teacher education in their country. It provides the following: an informed understanding of the similarities in international challenges that result in teacher shortages, allowing for a global response to inform a global solution (as demanded by UNESCO); in-depth discussions of specific contexts in relation to teacher recruitment and retention, such as place-based challenges e.g. educationally isolated, coastal and small schools in England; rural schools in Australia; Jewish and Arab sector schools in Israel; evaluations of interventions attempted in different countries to mitigate challenges of either teacher recruitment or retention, allowing a global response and informed solutions are offered.

The contents in detail

Teacher shortages are widely reported across the globe. Solutions to attract and keep teachers in the profession differ by country, region and in some cases locality. Ensuring a sustainable, high quality teaching workforce is of international concern. Exploring Teacher Recruitment and Retention offers insight into the complexity of maintaining the supply of teachers in England and internationally.

Ovenden-Hope and Passy (editors) bring together expert observations and research on teacher recruitment and retention, illuminating different perspectives on causes and solutions for the crisis of teacher supply. The importance of contextual issues, both within and across a range of national situations, is recognised, which brings a new dimension to understanding the complexity of the challenge of sustaining a qualified teaching workforce.

Part One of Exploring Teacher Recruitment and Retention focuses on England. The history of teacher workforce supply is considered in relation to this current crisis. Government responses to mitigate teacher shortages are considered, while presenting research and observations on the specific contextual and place based challenges that affect attracting and keeping teachers in the profession.

Part Two extends the focus into international perspectives on teacher supply. The complexity in systems of governance for controlling the number of new teachers entering the profession is presented across countries. The importance of professional development and learning and financial incentives as support for teacher retention is considered. The similarity between nations in the need for teacher recruitment and retention - the need for an efficient, appropriate and sustained supply of high quality teachers - is stark.

The United Nations Sustainable Development Goal 4: Quality Education demands a collaborative approach to teacher supply. Exploring Teacher Recruitment and Retention offers expert understanding of international perspectives in different contexts and contributes to a better global understanding of the challenges and solutions for a sustainable, qualified teaching workforce.

A review by James O'Meara

Ovenden-Hope and Passy draw on expertise from across the globe to provide a timely and comprehensive exploration of contextual challenges associated with isolation, teacher recruitment and retention. Part I explores a range of perspectives on recruitment and retention of teachers in England. The authors raise critical questions about shortages and workforce supply in England. Readers will enjoy the well-crafted critiques, research informed positions, and context-specific discussions about the impact of teacher workforce supply and shortages in England. Part II of the book expands the context contributions to include international perspectives on teacher recruitment and retention. The addition of international authors results in a mix of new challenges and challenges common to all the settings described in both parts of the book. Readers will benefit from learning about the similarities and differences in the language and approaches used across the globe to describe and address issues in teacher recruitment, preparation and retention. All readers will find much to stimulate their thinking on teacher supply issues. The breadth of topics and the geographic reach of contexts will provoke both connection and disruption. Ovenden-Hope and Passy have provided us with a rich mix of authors who help us think more clearly about the contextual challenges associated with global teacher recruitment and retention."

James O'Meara



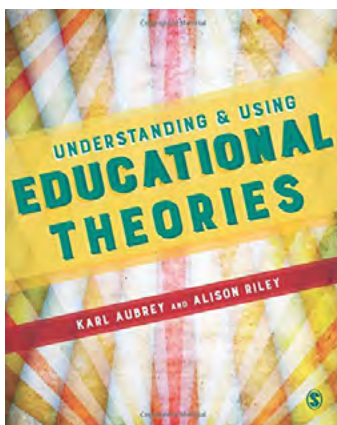
Professor James O'Meara is the Dean College of Education, Texas A&M International University. His research interests span the development of faculty in a global context and advancing education across cultures and in diverse, blended learning environments in both rural and remote communities. He currently serves as the president of the International Council on Education for Teaching, with active membership in key UNESCO groups. He is the editor of Pathways to Literate Worlds, Oxford: Oxford University Publishing, and co-editor of Internationalization in Higher Education: Global Perspectives on Collaboration and Change, New York: Nova Science Publishers. He has authored numerous articles, chapters, research reports, curriculum guides and manuals and teacher education publications, in countries including Africa, Australia, India, Singapore and New Zealand, among others.

You will find the book [here](#)

Understanding And Using Educational Theories

By Karl Aubrey and Alison Riley,

Reviewed by Terry Freedman



Some years ago I was quite horrified when, in response to my mentioning Bruner, the teacher I was speaking to said "Who?"

Now, one might argue that Bruner was writing over 80 years ago. Since then, our understanding of how the brain works, and how children learn, have undergone dramatic changes. Therefore, what can the writings of a long-dead theorist tell today's teachers? Moreover, hardly a month seems to go by without a new book appearing on the topic of myths about learning, and new (supposed) insights from the field of neuroscience.

And yet, if one regards teaching as a craft, and the teacher as a craftsperson

and not merely a cipher whose role is to put into practice the latest approved approach or, worse, to act as a mere “facilitator”, one is led to an inescapable position.

Any craftsman has to draw on a rich legacy of accumulated insights and wisdom. Furthermore, in an ideal world they will automatically draw on and apply the approach that is most appropriate for that particular class at that particular time. They cannot do that without at least a passing knowledge of the different approaches available.

That’s where this book comes in. In around a dozen or so pages, each of fourteen thinkers and their theories of education are covered. Obviously, fourteen pages is not enough to explore a theory in any great depth, and so subtleties may be glossed over. For example, Bloom’s (cognitive) taxonomy is covered, and treated as a hierarchy, yet Bloom himself appeared not to do so, regarding knowledge (the “lowest” skill) as important as evaluation. Nevertheless, the book gives a very succinct account of each theory, and provides a good starting point for further education. If one is cynical, one could regard this as a sort of educational version of books with titles like “How to become ridiculously well-read in a week”. Hopefully, though, readers will gain some familiarity in several theories, and more in-depth knowledge of others.

At the very least, this book should provide a sound basis on which to evaluate new theories as they emerge.

Summary Notes

The first edition covers 14 theories, including Etienne Wenger’s communities of practice. The second edition includes three more theorists and their theories:

Understanding And Using Educational Theories, 2nd Ed, By Karl Aubrey and Alison Riley, Sage Publications Ltd, 2018, 978-1526436610

Sage Publications Ltd, 2015, 978-1473905900

Terry Freedman



Terry Freedman is a freelance writer and consultant, and publishes the ICT & Computing in Education website. This review originally appeared on that website on 2nd July 2021.

Terry is a Fellow of MirandaNet, an ex-chair of Naace, and a member of the committee of the Technology & Pedagogy and Education Association. A freelance writer and consultant, he publishes the ICT & Computing in Education website and the Digital Education newsletter. See his website www.ictineducation.org

News

Creating a better future by transforming education

BETT22

Once again Naace are expecting to have a stand at Bett, the world's leading EdTech event returning to ExCeL London on 19-21 January 2022 with a new and improved floorplan. For educators there will be new zones, exciting features and more 1-2-1 networking space than ever before. The BETT team working with BESA are creating an event where technologies, practices, ideas and people come together. The aim of the team is "to celebrate education and inspire future discussions as together we discover how technology and innovation enable educators and learners to thrive."

More news will emerge about Naace activities at BETT22 nearer the event depending on the Covid regulations <https://www.bettshow.com/about-bett>

Alison Blackburn



Thanks to Alison Blackburn for her editorial support.

Alison qualified as a teacher in the early 70's, when teacher training, over three years, was completed first and then the B.Ed. Her initial direct encounter with anything to do with computers was in her first job. All those responsible for a subject were interviewed by an LEA Officer (remember them?). She was asked, "How would you use a computer in your RE lessons?" Her response was, "Well, you tell me what your computer can do, and I'll tell you if I can use it." A broken ankle forced Alison to look for something worthwhile to do whilst incapacitated and she completed an online Diploma in Proof-reading. Another IT first!

After retirement from teaching, she trained as a Lay Minister (formerly Reader) and went on to qualify with a BA in Theology, Mission and Ministry from Durham University.

She has become accustomed to using IT in a wide variety of situations.

ISBN: 978-1-5136-7486-5

