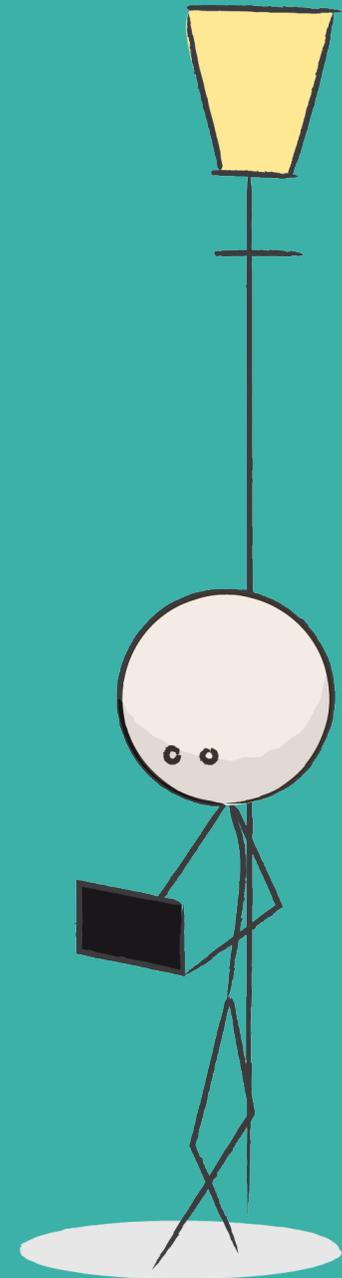
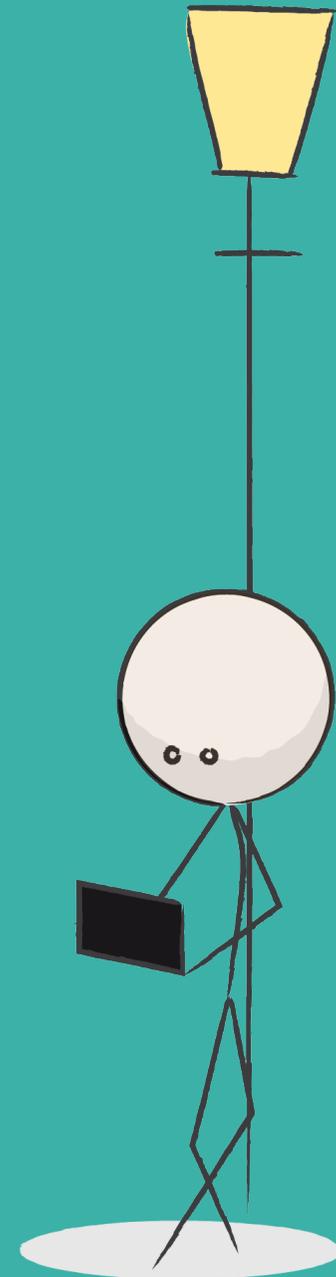


# MiTE Conference 2018



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# Welcome from the Head of the School of Education, NUI Galway



On behalf of the School of Education I am delighted to welcome all participants and attendees to the Mobile Technology in Initial Teacher Education (MiTE) Conference this weekend. The School of Education at NUI Galway is very proud of our achievements to date in leading and supporting the integration of mobile technologies in our initial and continuous teacher education programmes. Enhancing the quality of teaching, both within our own programmes and in schools, through our graduate teachers, is a core mission of the School and this Conference will add considerable knowledge and capacity to our endeavours. In particular, I wish to commend our colleagues, Conference Organisers, Seán Ó Grádaigh and Sinéad Ní Ghuidhir, on the impressive array of speakers, contributors and workshop themes which feature over the two days.

**Prof. Gerry MacRuairc**

# Focal ó na Cathaoirligh

## Message from the Chairpersons

A Chairde,

Fearaimid fíorchaoin fáilte romhaibh go Gaillimh inniu, chuig an gceathrú Comhdháil Idirnáisiúnta i dteicneolaíocht shoghluaiste in Oideachas Tosaigh Múinteoirí, MiTE 2018!

Mobile Technology has the ability to change how we Teach, Learn & Assess. Students can now learn when, where and how suits them best. In the past there was a limit to knowledge in the classroom in the form of 'the book', or 'the teacher' who was seen to be the oracle of all knowledge. Mobile Technology in schools has broken that knowledge ceiling and has the ability to democratise education as a result. Students and teachers now have the tools which facilitate self-directed teaching & learning.

Knowledge can now be personalised, localised and tailored individually. It is no longer confined to the limits of 'the book'. Initial teacher education can play a central role in the integration of mobile technology within teaching and learning in the classroom.

This conference will celebrate the possibilities and explore the challenges of integrating mobile technology in ITE and also in the broader field of education, in order to promote best practice by teachers, students, schools and indeed all stakeholders.

We hope you will be inspired by the many and varied speakers this weekend, and that you will leave empowered and enriched by what you have seen and heard.

Bain taitneamh as MiTE 2018! Le gach deá-ghuí,

Seán Ó Grádaigh & Sinéad Ní Ghuidhir  
Co-Chairs of Mite Conference 2018



# Keynote Speaker

## Dr. Reshan Richards

is adjunct assistant professor at Teachers College, Columbia University, associate at Columbia University's School for Professional Studies, and Chief Learning Officer at Explain Everything, which he co-founded. Reshan also teaches Startup 101, an entrepreneurship course at Montclair Kimberley Academy in NJ and works with school leaders all over the world through the Global Online Academy network.

Reshan is the author of *Blending Leadership: Six Simple Beliefs for Leading Online and Off* and writes a monthly column about leadership and technology on EdSurge. His research on mobile technology and assessment has been recognized internationally in publications such as the *Journal of Online Learning and Teaching*, the *International Journal of Instructional Media*, and most recently in the *Handbook of Mobile Learning in the Contemporary Classroom*.

An Apple Distinguished Educator and member of Mensa, Reshan has an Ed.D. in Instructional Technology and Media from Teachers College, Columbia University, an Ed.M in Learning and Teaching from Harvard University, and a B.A. in Music from Columbia University.



## Dr. William Rankin

is an independent learning consultant who works with schools, governments, and learning organisations throughout the world to design, develop, and implement innovative learning initiatives. Prior to founding Unfold Learning LLC, he served as Director of Learning on the global education team at Apple Inc. in Cupertino, California from 2013-16, where he had responsibility for developing, promoting, and enhancing innovative teaching and learning in pre-K to post-20 education. While there, he helped develop the program that became known as the Apple Developer Academy. Before Apple, Rankin worked as an academic in higher education for 24 years, concluding his time as a Professor of English and Honors College Fellow at Abilene Christian University in Abilene, Texas. As ACU's Director of Educational Innovation, he helped design the world's first one-to-one that gave every student an iOS device as a platform for exploring new forms of mobile learning. He was named Campus Technology magazine's Innovator of the Year for mobile learning in 2009 and was named an Apple Distinguished Educator that same year. He has received numerous awards for educational leadership and teaching and has presented on educational technologies and emerging pedagogies in more than thirty countries.



## Dr. Kevin Burden

is Professor of Digital Education in the Faculty of Arts, Cultures and Education (FACE) at the University of Hull where he leads a team investigating the impact and potential of digital technologies in education. His research area explores the affordances of mobile and pervasive computing with a particular focus on teacher education and professional development. He is currently leading several international research projects focusing on the use of mobile technologies in schools and colleges and recently completed a major Erasmus+ project to create a mobile learning toolkit for teacher educators ([mobilelearningtoolkit.com](http://mobilelearningtoolkit.com)). He is a Distinguished Visiting Professor at the University of Technology, Sydney and has previously been invited to Hong Kong University and the University of Macau. Kevin has attracted over £1.5m in competitive grants and awards and was made a National Teaching Fellow by the UK Higher Education Academy (HEA) for his work in supporting students and staff in the innovative use of digital technologies. He is the author of over fifty peer-reviewed articles, chapters and publications and has recently co-authored a book on Teacher Education Futures for Springer (due for release in early 2018).



# A Conversation with International Experts

Facilitated by Sinéad Ní Ghuidhir (NUI Galway)



**Helen Caldwell**

Senior Lecturer in Education  
ITTE Research Fellow, FHEA  
University of Northampton



**Xiong Xi Bei (Bella)**

Director of International Office  
Faculty of Education  
Guangxi Normal University, China



**Terri Cullen**

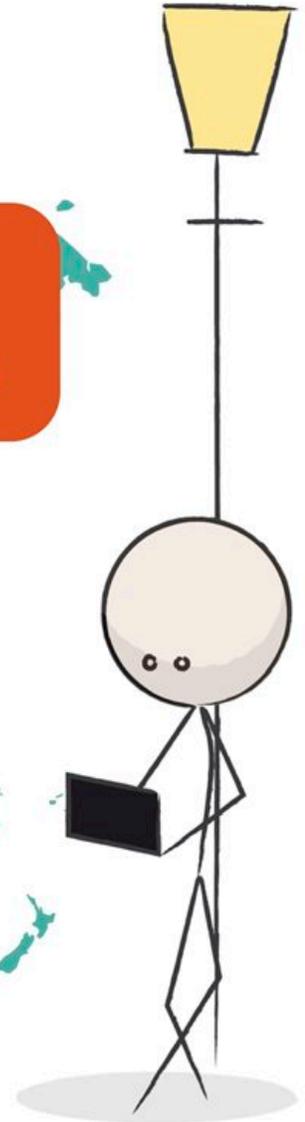
Associate Professor  
Jeannine Rainbolt College of Ed.  
University of Oklahoma



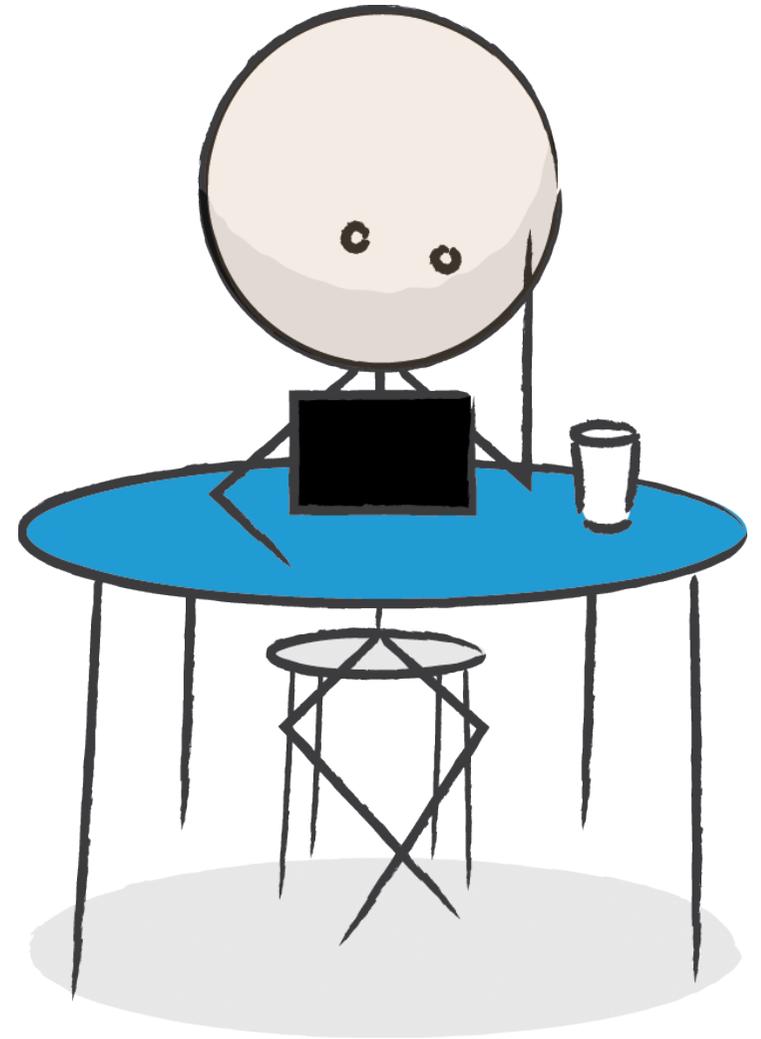
**Grace Oakley**

MTeach (Primary) Course Coordinator  
Graduate School of Education  
University of Western Australia

**@MiTEconference**  
**#MiTE2018**



**“It is inaccurate to assume that because pre-service teachers are tech savvy in their personal lives they will understand how to use technology effectively to support learning without specific training and practice. This expertise does not come through the completion of one educational technology course separate from other methods courses but through the inclusion of experiences with educational technology in all courses modeled by the faculty in teacher preparation programs.”**



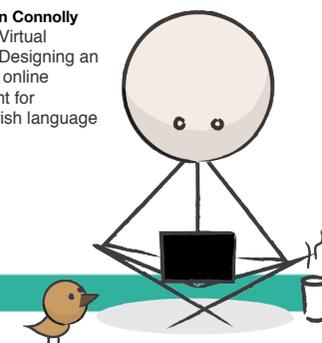
# MiTE Conference 2018

## Friday Schedule: January 19th 2018



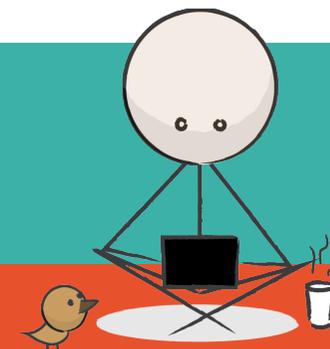
8:30-8:55	Registration
9:00-9:20	Welcome & Official Opening <b>Professor Gerry MacRuairc</b> , School of Education NUIG
9:20-9:30	<b>Tony Hall</b> MiTE Publication opportunities (IJMBL)
9:30-10:10	<b>Kevin Burden</b> Keynote
10:10-10:30	Coffee

	Room A	Room B	Room C	Room D	Room E
10:40 - 11:00	<b>Grace Oakley</b> Mobile technologies, language and literacy in Early Childhood and Primary education: 10 cool considerations for professional learning	<b>Davide Parmigiani</b> Between lectures and teaching practice: how to become reflective teachers using mobile devices	<b>Charles B. Hodges</b> Teacher Perceptions Related to Mobile Technology Adoption in Southeastern US Schools	<b>Judith Harford &amp; Rachel Farrell</b> Lights, tablet, reflection 2.0	<b>Short Paper Tract</b>
11:00 - 11:20	<b>Donna Wake</b> Teacher Education Candidates' Responses to the First Year of a 1:1 Mobile Learning Initiative	<b>Michael Slade</b> CalStateTEACH 3.0 Mobile Curriculum Delivery	<b>Tony Sweeney</b> Writing and iPads in the Early Years: Perspectives from Children and Teachers	<b>Amanda Thomas</b> Supporting and Scaffolding Pre-service Teachers' Technology Integration in Elementary Mathematics Lessons	10:30 <b>Beth Holland</b> Ignite School Innovation through the Power of Paradigms
11:20 - 11:40	<b>Sarah Wright</b> Teachers don't Tweet... an exploration of mobile technologies and social media with academics & pre service teachers.	<b>Melanie Ní Dhuinn</b> "Perfect Storms" A Case Study of the introduction and implementation of a reconceptualised 120 credit Initial Teacher Education (ITE) consecutive programme utilising a reconceptualised Technology embedded Teaching, Learning and Assessment approach in an Irish Higher Education Institution (HEI).	<b>Chris Penny &amp; Jordan Schugar</b> Run, Jump, Code. Everyone Can Do It?	<b>R.Austin, M.Brown, P.Cowan, J.O'Hara &amp; S.Roulston</b> Bridging the Gap: An Investigation of ITE Tutors use of Digital Technologies for ITE Preparation on the Island of Ireland	10:40 <b>Marguerita MCGovern</b> Touch, Click and Be Informed
11:50 - 12:30	A Conversation with International Experts <b>Terri Cullen, Helen Caldwell, Xiong Xi Bei, Grace Oakley</b>				
12:30 - 1:20	Lunch				
1:20 - 1:40	<b>Chris Greer</b> Georgia State Parks: A Multi-touch Textbook Created with Students	<b>Gail Deirdre Drennan</b> Educational Affordances of iPads: A conceptual framework	<b>Sauna McGill</b> Measuring the impact of using iPads to improve Mathematics Content Knowledge and Pedagogical Content Knowledge Among Primary PGCE student Teachers	<b>E. Whewell, R. Heaton &amp; H. Caldwell</b> How does mobile technology facilitate teachers to learn outdoors?	10:50 <b>Aine Moran</b> It's your call - Personalised Learning in Practice
1:40 - 2:00	<b>Anne-Marie Clarke</b> Most Innovative Technology Lessons Ever	<b>George Saltsman</b> Unlocking talent through technology: Using iPads to bring basic literacy and numeracy to Malawi	<b>Anne-Louise Agnew</b> Embracing Change - The Agile Teacher's DNA	<b>Mrs. Beth Holland</b> From Teacher Education to Opportunity to Learn - Creating the Conditions for Teacher Innovation	11:00 <b>Mr Jens Palkowitsch-Kuehl</b> Exploring faith in virtual and augmented spaces
2:00 - 2:20	<b>Michael S. Mills</b> Benefits and Limitations of Faculty Authorship of Open-Access Multi-Touch Textbooks: A Case Study Analysis	<b>David Hamill</b> iBooks Author: A literary review.	<b>Theresa A Cullen</b> Measuring the Outcomes of a 1 to 1 Teacher Education Program	<b>Rachel Farrell &amp; Martin Browne</b> Testing a model of CPD for the introduction of ePortfolios in Irish Education. Farrell, R. Brown, M., McNamara, G., O'Hara, J. and O'Brien, S. (2017)	11:10 <b>Matt Glowatz</b> Engagement and Technology: Revisiting the Technological, Pedagogical and Content Knowledge Framework (TPACK) in Higher Education (HE): The Academics' Perspectives
2:20 - 2:40	<b>Mathew Pullen</b> Social media and the trainee teacher	<b>Ann Scholl</b> The Confusing Landscape A surfeit of advice on educational digital design	<b>Ciarán Ó Gallchóir &amp; Oliver McGarr</b> Exploring Pre-service Teachers' Justifications for an iPad Technology use in schools	<b>Cassandra Kelley</b> Enhancing Student Teachers' Reflective Practice through iSupervision Virtual Observations	11:20 <b>Ray Kirtley</b> Girls into Global STEM
3:00 - 4:00	Keynote <b>William Rankin</b>				



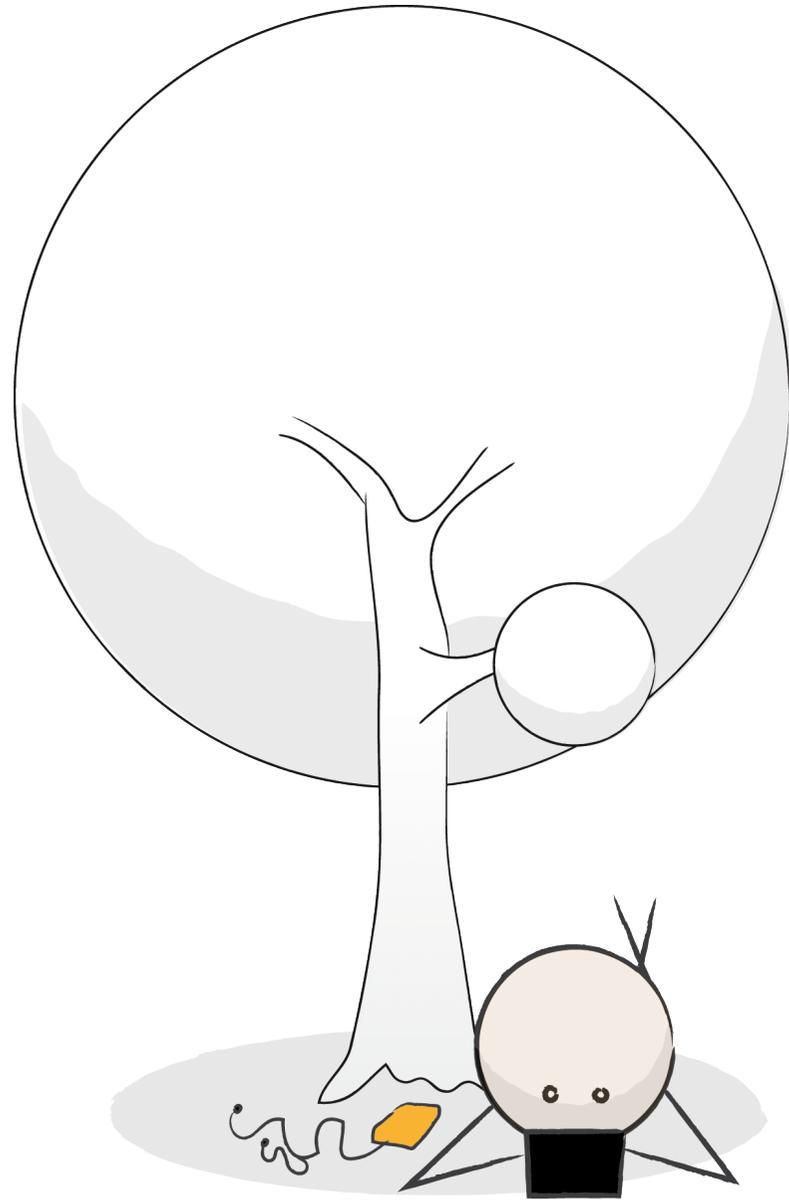
# MiTE Conference 2018

## International Conference on Mobile Technology in Teacher Education



### Workshop Schedule : Saturday, January 20th,

8:45 - 9:15	Registration				
9:15 - 9:30	Welcome and Opening Address				
9:30 - 10:00	Technology Enhanced Learning : Examples of Best Practice!				
10:00 - 10:15	A word from our Sponsors...				
10:15 - 10:40	Coffee				
	Room A	Room B	Room C (iPad Classroom)	Room D (Mac Room)	Room E
10:40 -11:30	<b>Reshan Richards</b> Sketchnoting on iPad: visualising listening & synthesis	<b>Michael O'Kane &amp; Miriam Walsh</b> Introduction to Coding (Swift Playgrounds)	<b>Greg Hughes &amp; Chris Greer</b> Enhancing Assessment for Learning with iPad	<b>Fons van den Berg</b> Intro to iBooks Author: Workshop	<b>Kurt Klynen &amp; Johan Andersson</b> The Joy of Professional Learning
11:30 - 12:20	<b>Eoin Hughes</b> GarageBand on iPad: Not just for Music Class...	<b>Cormac Cahill</b> The Magic of Green Screen Film Making in the Classroom	<b>Mat Pullen &amp; Catherine Mangan</b> Apple Classroom	<b>Bill Rankin</b> Advanced Keynote for Mac	<b>Johan Andersson</b> Teaching using iTunesU! - Activity based learning
12:30 - 13:15	Lunch				
13:20 - 14:10	Keynote <b>Reshan Richards</b>				
14:10 - 15:00	<b>Eoin Hughes &amp; Michael Mills</b> 'Clips' for Video making in the Classroom	<b>Peter Baxter</b> Stop motion : Animation for Learning	<b>Mat Pullen &amp; Catherine Mangan</b> Changing Mindsets : Mobile Methodologies in the Classroom	<b>Bea Leiderman</b> Scrum: A Framework for Effective Collaboration	<b>Jordan Schugar &amp; Chris Penny</b> Storytelling in 360
15:00 -15:50	<b>Reshan Richards</b> Lasting, personal feedback with Explain Everything	<b>Terri Cullen &amp; Lucy Gray</b> Apple Teacher	<b>Jamie Johnston (Wriggle)</b> Reaching All Learners: iPad Accessibility Features	<b>John Ittelson &amp; Michael Slade</b> Production Studio in a Backpack	<b>Adrian Carey</b> Dyslexic Provision through Apple Technology
16:00 - 16:30	Final comments & Conference close				



# Friday's Research Papers

# Grace Oakley

## Graduate School of Education, University of Western Australia

### **Mobile technologies, language and literacy in Early Childhood and Primary education: 10 cool considerations for professional learning**

Teachers are at the forefront in developing m-learning innovations for teaching language and literacy in Early Childhood and Primary classrooms and like never before, they are sharing their discoveries, practices, expertise and insights in a variety of networks, from face to face 'teach meets' to social media platforms like Pinterest, Twitter and Facebook.

Many teachers are even making money out of sharing their pedagogical ideas and resources on platforms like Teachers Pay Teachers and others are gaining almost Kardashian fame among their peers. Although the sharing of practice in these spaces has many benefits for professional learning (PL), what are the processes of quality control at play?

Teachers are also accessing blogs and websites created by commercial companies with something to sell, who post information about m-learning and literacy that might seem authoritative and credible, but is it? Is there an element of 'fake PL' about m-learning and literacy that needs to be identified

and examined? Posts with titles like '7 ways to use iPads', '10 tips for flipping classrooms and mobile learning' and '20 app to teach reading' are seductive and may be effective in inspiring pre-service and in-service teachers to consider new pedagogical tools and strategies – but to what extent are teachers succeeding in sifting and synthesising all of this information and designing coherent literacy curriculum that makes powerful use of mobile technologies? In this presentation, Dr Grace Oakley from the University of Western Australia will discuss these questions and talk about how literacy pedagogy and mobile learning theory might help teachers and teacher educators make sense of the plethora of tips and lesson hacks they are exposed to through their networks. In doing this, Grace will draw from her forthcoming edited book, "Mobile Technologies in Children's Language and Literacy: Innovative Pedagogy in Preschool and Primary Education", to be published in 2018 by Emerald Publishing.

**Donna Wake**

College of Education, University of Central Arkansas, USA

**Teacher Education Candidates' Responses to the First Year of a 1:1 Mobile Learning Initiative**

This quasi-experimental study examines teacher education candidates' responses to the first year of a 1:1 mobile learning initiative. Participants in the study were traditional undergraduate students enrolled in multiple teacher education licensure programs who were required to use an iPad to complete their program of study. Quantitative results indicate a statistically significant effect for candidate engagement with course content and engagement with peers. Qualitative data reflecting candidates' perceptions of the experience yielded categories positively supportive of the experience but did uncover some concerns indicating a differential experience based on candidate program of study

# Sarah Wright

Edge Hill University - UK

## **Teachers don't Tweet... an exploration of mobile technologies and social media with academics & pre service teachers.**

The meteoric rise of social media has made fundamental changes to our lives, (Kolbitsch & Maurer 2006; Wodzicki et al 2011.) Yet the perceptions of its place in higher education differs widely between students and academics alike. The use of social media within higher education is becoming increasingly popular (Manca and Ranieri; 2016) this paper will explore the potential impact of using mobile devices and social media with undergraduate pre service teachers.

Wilson (2013) is clear that social media in higher education is not simply about a use of technology. Several key benefits have been identified such as the use use of social media to support knowledge creation Kassens-Noor (2012) and motivation, Moody (2010). The paper will demonstrate a variety of approaches that have been undertaken to enhance these benefits and an exploration of their impact.

An integral aspect of pre-service teacher education is the development of a professional presence, Scanlon (2011). Fenwick (2016) suggests e-professionalism is term for significant consideration. This suggests that the use of social media goes far beyond its use for administration or marketing purposes and that both students and academics could benefit from a creative and innovative use of these tools. The paper will explore both current practices and potential future projects which use mobile technologies to develop teacher presence and professionalism.

# Davide Parmigiani

Department of Education, University of Genova, Italy

## Between lectures and teaching practice: how to become reflective teachers using mobile devices

Parmigiani D. (1), Benigno E. (2), van der Stap N. (3), Edwards S. (3)  
1 University of Genoa, Italy  
2 Educational Technology Institute, National Research Council, Genoa, Italy  
3 University of Applied Sciences, Utrecht, The Netherlands.  
This study was aimed at investigating the role of mobile devices in facilitating reflective thinking in order to develop student teacher competences. The overall research question was: how to connect theory and practice and how they can support each other in a virtuous circle? The specific research question was related to the contribution of mobile devices within this relationship: how can mobile devices facilitate reflective thinking in order to develop teacher competences? The study has been designed by three institutions (University of Genoa; University of Applied Sciences of Utrecht and Educational Technology Institute, National Research Council) in two different countries: Italy and The Netherlands. The design model provided a circle composed of four steps: 1. knowledge acquisition, teaching and assessing strategies have been presented during lectures at university; 2. reflection on knowledge, the student teachers experienced a first period of reflection with mobile devices, on the lectures' topics; 3. application of knowledge, the student teachers applied the strategies in the classroom during teaching practice; 4. Reflection on application of knowledge, the student teachers experienced a second period of reflection with mobile devices, on the activities carried out in the classroom. This cycle has been carried out twice: the first

time focused on teaching strategies, the second time on assessing strategies. The participants have been 10 Italian and 8 Dutch student teachers. A protocol indicated the actions at university, at school and during the reflection periods. Two questionnaires have been administered to the student teachers in order to underline if and how the mobile devices affected the reflection level and the teacher competence development. In particular, we used the Profile of Reflective Thinking Attributes (PRTA) questionnaire (Taggart & Wilson, 2005) and a Reflective Thinking and Mobile Devices (RTMD) questionnaire composed of closed and open-ended questions, in order to collect both quantitative and qualitative data. Repeated measures ANOVA has been carried out to analyse the quantitative data; instead, we used MAXQDA, a qualitative data analysis software, to underline the main categories and the ideas arising from the student teachers' comments. The quantitative and qualitative data analysis shows how mobile devices can support the reflective thinking development of novice preservice teachers, during an educational path carried out between the lectures at the university and the teaching practice at school. During the presentation, we will show in detail the data analysis, the findings and, also, the limits, the shortcomings and the future development.

# Michael Slade

## CalStateTEACH Faculty, California State University, USA

### **CalStateTEACH 3.0 Mobile Curriculum Delivery**

The statewide teacher education program in California called CalStateTEACH has been experimenting with hybrid course delivery methods for several years. Starting this year, a new Curriculum referred to as CST 3.0 is being delivered on iPad using Multitouch books, Canvas LMS, Zoom video conferencing, Redshelf ebooks, and custom recording/supervision/annotation tools. The presentation reviews this work in progress affecting 80 faculty members and 1000 teacher candidates on a continuing basis.

# Melanie Ní Dhuinn

## School of Education, Trinity College Dublin

### **“Perfect Storms” A Case Study of the introduction and implementation of a reconceptualised 120 credit Initial Teacher Education (ITE) consecutive programme utilising a reconceptualised Technology embedded Teaching, Learning and Assessment approach in an Irish Higher Education Institution.**

The reconceptualization of the Initial Teacher Education (ITE) space from 2012 onwards laid the foundation for the introduction of the Professional Master of Education (PME) ITE programme in Higher Education Institutions (HEIs) in 2014. The establishment of the PME was a watershed moment in the Irish ITE space of concurrent and consecutive provision in both the primary and post-primary sectors as it significantly transformed the landscape of ITE provision. Informed by ITE models from other jurisdictions and with a special affinity to the Finish model the PME was nestled against the international backdrop of validated ITE programmes in Finland which were reported (Niemi & Ukku-Sihvonen, 2009) as affording student teachers the opportunity to engage in a high-quality programme of ITE focusing on breadth, width and depth of knowledge while supporting an inclusive but differentiated approach. The introduction of a 120-credit two-year ITE programme was opportune but was also viewed as challenging. Cited challenges included adjusting to M level programmes with additional credits, additional assessment, extended school placement, increased emphasis on research, resource requirements and additional costs. On the flip side, the challenges presented opportunities for HEIs to reconceptualise teaching, learning and assessment approaches in ITE by utilising and harnessing technology to transform teaching,

learning and assessment practices in ITE programmes and mobilise student-teachers to maximise their engagement from both the University and School setting. The facilitation of student-teacher learning through the provision of a blended learning approach that harnessed the functionality of the HEI Virtual Learning Environment (VLE) to create, differentiate and design content to connect theory and practice unlocked many opportunities for effective and validated approaches. Central to the successful implementation of a blended learning approach on the PME are the approaches and conceptions of HEI staff towards teaching, learning and assessing with technology. Englund, Olofsson, & Price, (2017) report that the adoption of educational technology by teachers in Higher Education is a complex process and is influenced by many factors both extrinsic and intrinsic. In the case study HEI, conceptions and approaches vary and this impacts on implementation. The confluence of the implementation of a new ITE programme coupled with the reconceptualization of the teaching, learning and assessment approach mediated and mobilised through technology has created the perfect pedagogic storm of storms for the case study HEI. This paper reports on the opportunities and challenges over three years of implementation of the PME and reflects on lesson learned.

# Charles B. Hodges

## College of Education Georgia Southern University

### Teacher Perceptions Related to Mobile Technology Adoption in Southeastern US Schools

The Horizon Report (Freeman, Adams Becker, Cummins, Davis, Hall Giesinger, 2017) is an annual publication of the New Media Consortium in which future trends in educational technology are predicted. Various editions of the Horizon Report are published, including an edition specific to K-12 schools worldwide. In this presentation, the author will share the reactions of teachers from the southeastern United States who were asked to read the K-12 edition of the Horizon Report and respond to the predictions. Specifically, the teachers (n=36) were asked to respond to the following discussion assignment in a graduate-level Instructional Technology course in which they were enrolled in 2016: "Select a technology from the Horizon Report that you think will be adopted in your school or school system soon. Also, select the technology from the Horizon Report that you feel is least likely to be adopted by your system. Explain your choices. Identify the barriers you perceive that are preventing the adoption of the technology you selected as least likely to be adopted. For this discussion, assume your school has the financial resources to implement any of these technologies. That is, funding is not a barrier." Emerging topics relevant to mobile technology in teacher education were frequently included in the teachers' responses. Teachers included BYOD (Bring Your Own Device), wearable technology, and AR/VR (augmented or virtual reality) among others in their

responses. Interestingly, each of these technologies was sometimes referenced as will-be-adopted, and sometimes referenced as least-likely-to-be-adopted. Further analysis of the discussion data on these topics will reveal perceived barriers (e.g. Ertmer, 1999) to adoption of these technologies, thus enabling policy makers and school leaders to address them if they are considering implementations of those technologies. In the case where teachers included technologies as will-be-adopted, there are opportunities to summarize their comments, which may provide insights into how to address the perceived barriers communicated by other participants. It also is important for teacher educators to understand the environments in which their teacher candidates will soon be working. The authentic perceptions and comments from in-service teachers will aid teacher educators and their teacher candidates in understanding current practice and policy in schools. While this presentation is focused on the context of the southeastern United States, it will provide points of discussion on these topics for comparison and contrast between other attendees of the International Conference on Mobile Technology in Teacher Education.

# Chris Penny & Jordan Schugar

## West Chester University, USA

### **Writing and iPads in the Early Years: Perspectives from Children and Teachers**

Coding and the learn-to-code movement is no longer just taught in computer science classrooms, but rather has proliferated widely throughout all ages and grade levels. Yet, educators are just beginning to understand the complexities with teaching coding. In this research, the authors posit that coding is a language and should be taught through a literacy-based lens. Using linear discriminant analysis, the authors found associations between pre-service teachers' abilities to learn to code from Apple's Swift Playgrounds and their documented reading, math, and writing aptitude. In addition, pre-service teachers' interests, background knowledge, and experiences with coding were not associated with their likelihood to successfully complete a coding task. In general, pre-service teachers had difficulty transferring what they learned about coding to a similar task outside of the Swift Playgrounds app.

# Judith Harford & Rachel Farrell

## University College Dublin, Ireland

### **Lights, tablet, reflection 2.0**

Research on the use of digital technology in initial teacher education is limited. This project will examine how the professional learning and pedagogical content knowledge development of student teachers on school placement can be supported by the use of Surface Tablet devices and ePortfolios. This paper will discuss the results of a small-scale initiative to support two groups of students across two different tutorial groups (20 students in total) to engage in micro-teaching in collaboration with their cooperating teachers while on school placement. Student were selected from partner school that are currently using Microsoft 365 and who also may be using one to one Surface Tablet devices. The research team will use this focus group to examine the effectiveness of the use of Surface Tablets and Microsoft 365 technology to capture evidence of self-reflection and to document and showcase this through the use of an ePortfolios.

# Amanda Thomas

University of Nebraska-Lincoln, USA

## Supporting and Scaffolding Pre-service Teachers' Technology Integration in Elementary Mathematics Lessons

Numerous digital tools and resources are available to support the teaching and learning of elementary mathematics. However, U.S. elementary teachers must grapple with how to integrate technology in mathematics curriculum that tends to be heavily influenced by textbooks, curriculum materials, and administrative expectations (e.g., Banilower, Smith, Weiss, Malzahn, Campbell, & Weis, 2013), which may include minimal technology supports. To integrate technology in elementary mathematics curriculum, teachers must engage in complex design work that requires knowledge and skills relating to technology, curriculum, teaching practices, and mathematics content. This design work may be particularly challenging for pre-service teachers who are in the early stages of developing the knowledge and skills needed to teach mathematics. This session will share a study of 24 pre-service teachers' (PSTs') technology integration in elementary mathematics lessons. Throughout an elementary mathematics methods course, PSTs engaged in a scaffolded series of reflection, planning, and enactment of technology in three mathematics lessons. After planning and teaching a first mathematics lesson with no expectations for technology use, PSTs wrote general reflections about how technology could have been integrated to support the lesson. In the second mathematics lesson, PSTs planned and taught a lesson that may or may not include technology, and then

used a research-based framework (Thomas & Edson, 2017) to reflect on how technology could have been integrated to replace, amplify, or transform (Hughes, Thomas, & Scharber, 2006) one or more effective mathematics teaching practices (NCTM, 2014). PSTs' used the same framework for planning and teaching a third mathematics lesson with a technology integration requirement. After teaching the third lesson, PSTs reflected on another way in which the lesson could have been enhanced with technology in a "pie-in-the sky" situation (defined as access to any appropriate technologies/apps which may or may not be available in the actual classroom). Results indicate that PSTs shifted from technology integration that focused on replacement and procedural practice in the first lesson plan, toward technology integration that amplified or transformed specific mathematics teaching practices in the third lesson plan. Whereas initial technology integration ideas tended to focus on technology as a reward or "add on" to the original textbook lesson, later plans enhanced content and activities with more emphasis on conceptual understanding and discourse-rich mathematics learning opportunities. Findings from this project may have implications for other teacher education programs seeking to support PSTs with the design work for integrating technology in elementary mathematics lessons.

## **Bridging the Gap: An Investigation of ITE Tutors use of Digital Technologies for ITE Preparation on the Island of Ireland**

Across the continuum of education, all educators are expected to embrace and subsequently use digital tools to enhance and in the case of initial teacher education, model effective teaching and learning. In the case of Ireland for example, at a policy level, there is an increased effort to embed digital tools in primary and post-primary schools through the Digital Learning Framework (Department of Education, 2017). However, with no consistent vision for the use of digital technologies to enhance teaching and learning in higher education institutions; initial teacher education research has revealed concerns about pre-service course preparation to use technology effectively (CEO Forum on Education and Technology, 2000). On the one hand, while Initial Teacher Education (ITE) students have few issues about using technology, this is not always the case with ITE practices. To challenge these assumptions, as part of a SCOTENS funded project, a concurrent mixed methods study was carried out with a sample of ITE Tutors in Ireland and Northern Ireland. Using Parasuraman's (2000) National Technology Readiness Survey, data collection consisted of an electronic survey that was administered to 50 Initial Teacher Education Tutors. This was followed by a series of one-hour semi-structured interviews with 18 ITE tutors on the island. Quantitative data sets were analysed using parametric and nonparametric statistical techniques. This was followed by analysis of interview data using Miles

and Huberman's component of data analysis technique. Finally, data sets were converged to form an overall interpretation of the study. Summary results indicate that, on the one hand and consistent with the traditional use of ICT; almost all ITE tutors involved in the study used digital tools for the purpose of content creation and presentations during lectures. However, for the most part, particularly in the case of Ireland, the majority of ITE tutors involved in the study have yet to use digital tools for the purpose of collaboration and assessment for learning. In this regard, overall conclusions suggest that with no consistent vision for the use of digital tools at ITE level; there is a lack of consistency in the use of digital technologies for enhanced teaching and learning. As a result, it is suggested that, particularly in the case of Ireland, a number of higher education institutions are struggling to keep pace with the use of digital tools for assessment and collaboration at primary and post-primary level.

# Chris Greer

## Georgia College, USA

### **Georgia State Parks: A Multi-touch Textbook Created with Students**

I have recently completed a two year project that involved the creation of a Multi-touch textbook on the state parks of Georgia. This free resource was created by me and several other graduate students, in conjunction with the Georgia Department of Natural Resources. The book contains a great deal of content, including videos that feature biologists, historians, interpretive rangers, and other experts at the various locations. The book is free of charge and available for download from the Apple iBooks store, and should be available from Amazon within the coming month. The book will be an excellent supplementary resource for students throughout the state of Georgia as they learn more about science and history through the state park system. It can also be an excellent resource for the general public, providing a rich and interactive way to learn more about these unique and fascinating locations. This presentation will focus on the creation of the book as well as the digital media production that was needed to ensure a professional look and feel throughout the resource.

# Anne-Marie Clarke

## Hibernia College, Dublin, Ireland

### Most Innovative Technology Lessons Ever

Four innovative teachers of different subject disciplines, from a rural school in the West of Ireland, found common ground with a technology tool known as Instructional Digital Storytelling. This tool weaves together multimedia such as story, images, recorded narration, and sound. After describing themselves as storytelling teachers, they inadvertently developed a community of practice. Attending collaborative workshops on Instructional Digital Storytelling (IDS) afforded an opportunity for the teachers to develop a personal style of IDS appropriate for their particular subject and lesson aim. The methodological approach was positioned within narrative inquiry, which concentrated on the narration of each teachers' experience. The design comprised the development of two forms of story as data. The first form was the IDS developed by each teacher for use in one of their curriculum lessons within their subject area. The second took the form of a Reflective Digital Story (RDS) created by each teacher reflecting on their experience of creating and using the IDS in the classroom. Presentation of each participant teacher's narrative was complemented by thematic analysis across the four cases in relation to the TPACK framework. The findings indicated professional development of learning a new technology tool, such as Digital Story, is dependent on teacher ability to see a connection between the technology and content as well as its pedagogical uses. The style of IDS created by each

teacher was influenced by personal belief in the value of storytelling for instruction and the appropriateness of its use in their teaching area of the curriculum. Rewards of having created personal IDS' indicated increased teacher self-efficacy, student engagement and accelerated learning. However, the rewards were challenged by lack of resources such as time and pressure to deliver a curriculum. Teachers also indicated intentions to re-use and interest in creating further IDS, if time allowed them to do so.

**Michael S. Mills**

University of Central Arkansas, USA

**Benefits and Limitations of Faculty Authorship of Open-Access Multi-Touch Textbooks: A Case Study Analysis**

Benefits and Limitations of Faculty Authorship of Open-Access Multi-Touch Textbooks: A Case Study Analysis  
Abstract: Authoring open-access multi-touch books can be an effective means to alleviate the financial burden of textbook ownership while giving students access to dynamic, interactive resources. The authorship process can also give teachers an opportunity to deepen their own content knowledge and efficacy through the act of authoring such resources. This session provides a case-study analysis that illustrates how faculty can scaffold their own content knowledge and teaching practices by authoring open-access multi-touch interactive digital resources. Additional discussion will be on the limitations of multi-touch textbook authorship noted by faculty authors, including time constraints, lack of confidence in graphic design skills, and unfamiliarity with the full potential of interactive resources that complement the text.

# Mathew Pullen

## University of South Wales

### Social media and the trainee teacher

As part of developing the learner experience and employability at the University of South Wales a question arose around the use of social media and its impact on the teaching profession. After some initial research and personal reflection it was decided to look at how Twitter can have a positive influence PNB trainee teachers.

Consideration was given to three areas

- 1 Student knowledge
- 2 Student reputation
- 3 Professional networks

Reading around the subject showed that there was an issue of school budgets having an impact on training provided for teachers, this formed the first part of the work, to see how social media can support in developing further knowledge to inform teaching. Through my own personal experience I had gained new knowledge about the use of technology so felt that this could be tested on a wider scale.

My own personal experience also showed me that developing a professional network gave me support to become a master in my specific area, working with colleagues across the world and communicating on Twitter developed my personal understanding and confidence in delivery, again I hoped to see how this developed the trainee teacher.

Finally online reputation. Being in Wales this is now a stroking part off the new curriculum as part of the Digital

Competence Framework. Teaching safe and effective use of social media to our students was intended to have 2 further outcomes, firstly to support them in their own understanding of a digital footprint and secondly to support them in their own employability by creating a professional presence that gained them a reputation they could use to support their job applications.

Over the course of a year I was able to share the uses of Twitter, explore the issues and encourage the growth of professional dialogue. The presentation will look at the context of this and share the impact on the students themselves as well as sharing some of the impact seen by a wider audience of practising teachers who use Twitter.

# Gail Deirdre Drennan

## St Stithians College, Sandton, South Africa

### **Educational Affordances of iPads: A conceptual framework**

Educational Affordances of iPads: A conceptual framework  
Gail Drennan and Ian Moll  
School of Education,  
University of the Witwatersrand, Johannesburg, South Africa  
Keywords: iPads, affordances, conceptual framework, pedagogy, TPCK, SAMR  
Many studies consider educational iPad usage, but few examine resultant pedagogical changes. In this conceptual framework we catenate three concepts to understand these changes: the iPad's technological capabilities; the concomitant technological affordances; and the resultant development of new pedagogical affordances. Specific examples of each clarify their relationships. Further, the pedagogical affordances are discussed as six broad strands, illustrating how teachers' pedagogy can change when filtered through the TPCK and SAMR models. The strands are polysynchronous teaching and learning; digitized, enhanced learning compared to digital, transformed learning; student ownership of learning with teachers as facilitators; students as teachers of content and technology; teachers' triple agendas of content elaboration, academic argument, and digital citizenship; and student creativity. The discussion highlights benefits for teachers, students and parents in each strand. We postulate a conceptual link between the iPad's technological capabilities, which refers to built-in elements such as the camera, the technological affordances which reveal usage of the same such as using the camera to take

a photo, and the ensuing pedagogical affordances when technological affordances serve pedagogical interests such as using a photo to elucidate an educational concept. To show how new pedagogical affordances can be created, a table matches some iPad capabilities to some technological and pedagogical affordances and then ways in which teachers' pedagogy can change are discussed. To begin, a discussion of affordance theory briefly provides context, after which the educational affordances of pre-tablet information and communication technologies (ICTs) are discussed. Next, tablet affordances are examined, followed by a table linking the iPad's technological capabilities, technological affordances and pedagogical affordances. Subsequently we propose six ways in which iPad's technological affordances can create new pedagogical affordances, leading to a change in pedagogy. The conclusion is advanced that teachers can use these relationships to develop their TPCK, especially using the SAMR model, providing at least six advantages for teachers, students, and parents, when teachers incorporate these affordances into their pedagogy.

# George Saltsman

## Lamar University Texas, USA

### **Unlocking talent through technology: Using iPads to bring basic literacy and numeracy to Malawi**

This presentation highlights the work being done by UNICEF, Volunteer Service Overseas (VSO), Lamar University, University of Nottingham, and University of Malawi to utilize iPads and apps from One Billion to improve basic literacy and numeracy to primary students in Malawi. In the local environment, where research indicated only 8% of Malawian students were able to read a single word at the end of first grade, this project has seen remarkable success with students gaining an average of 18 months of learning in the first six weeks of intervention. Accelerated with \$4M USD grant from UNICEF this project has expanded to become part of the official curriculum for Malawi and over 80 teacher training centers have been established across the country. This research-focused presentation reports on two significant findings. The first being the outcomes of randomized control trials conducted by University of Nottingham to evaluate the effectiveness of a tablet intervention for supporting the development of early mathematical skills and literacy skills in primary school children in Malawi. The second being the quantitative research gathered from teachers who were asked to use of tablets and the challenges they expressed of adapting to a new instructional methodology.

# David Hamill

## Trinity College Dublin, Ireland

### **iBooks Author: A literary review.**

An emerging trend in classroom adoption of digital devices has developed as a result of a shift in educational policy in many schools, for many different reasons. Most recently, Hallissy, Butler, Hurley, and Marshall (2013) highlight the technological changes in the workplace and society in general, alongside the sweeping changes in educational systems, to meet students' needs in attainment of the necessary 21st century skillset. These most common workplace skills include critical thinking and problem solving, creativity and innovation, communication, collaboration, information management, effective use of technology, career and life skills and cultural awareness (Beers, 2011). Inevitably, today's 21st century learner's ultimately present educators with a unique set of challenges. As further suggested by Johnson et al. (2013, pp. 16-17), mobile devices such as tablets, smartphones, and mobile apps 'have become too capable, too ubiquitous, and too useful to ignore'. This significant investment in adopting mobile devices and the need to facilitate attainment of 21st century skills, clearly demands if devices such as tablet pc's can leverage mobile technology, while affording students the ability to enhance their learning (Martin & Ertzberger, 2013). Compelling research by Falloon (2015) has clearly identified features and attributes of one such device, the iPad, as potentially supporting student learning. A number of key studies have elaborated upon

this and earlier findings, as to the affordances of iPads and apps in key areas including collaboration, creativity, communication and curiosity (Attewell & Webster, 2005; Beauchamp, Burden, & Abbinett, 2015; Burden, Hopkins, Male, Martin, & Trala, 2012; Caldwell & Bird, 2015; Clarke, Svanaes, & Zimmermann, 2013; Goodwin, 2012; Heinrich, 2012; Twining & Evans, 2010). Today's iPad with its multifaceted apps, supports the ability to create, distribute and consume educational content (iBooks) whilst allowing a shift in the focus of instruction away from the teacher to the student. This student-centered approach has afforded students accessible and flexible anytime, anywhere learning, while subsequently affording teachers a change in their pedagogical practice (Rikala, Vesisenaho, & Mylläri, 2013). The development of immersive, interactive and engaging multi-touch iBooks for an iPad, using iBooks Author, potentially transforms the original classroom textbook and affords users the opportunity to construct and publish their own unique and original digital content. The primary focus of this paper is to present a systematic review of iBooks Author adoption in the development of learning artefacts, from the applications inception in early 2012, until the present day.

# Ann Scholl

## Nazarbayev University, Kazakhstan

### **The Confusing Landscape A surfeit of advice on educational digital design**

Digital tools from iBook Author, InDesign, iMovie, Explain Everything and other educational apps have created a digital disruption in textbook and educational curricular publication industry. Deeper than the textbook industry disruption, these new multimedia opportunities also disrupt traditional curricular and course design. Advice and studies regarding educational digital materials have multiplied and expanded beyond traditional educational research methodology. With decrease in costs of laboratory equipment necessary to carry out EEG (electroencephalography) , eye tracking and even MRI, studies of how students learn and how they interact with multimedia digital curricular materials have expanded beyond satisfaction surveys and traditional observational studies. However, from font choices to video types and assessment design, many of these studies conflict and provide us with a large set of conflicting and confusing advice on everything edtech. This is also complicated by technology companies creating education apps for recording of lectures in specified formats and platforms such as Coursera and EdX increasingly standardising digital course and video lecture design. This talk will outline some of the confusion created by these conflicting studies and practices and raise questions regarding how much to weigh and consider cognitive perceptual studies, traditional curricular design principles and other edtech design advice arising from related studies of web sites,

design aesthetic theory and marketing design. designing digital design in the context of traditional survey and observational studies. This talk is designed to primarily elicit discussion on the weight given to aesthetic, cognitive, observational, traditional survey studies. Keywords: Cognitive load, cognitive aesthetics, multimedia course design Selected Bibliography Ariasi, Nicola. Mason, Lucia. (2011) "Uncovering the Effect of Text Structure in Learning from a Science

# Shauna McGill

## Ulster University, Northern Ireland

### **Measuring the impact of using iPads to improve Mathematics Content Knowledge and Pedagogical Content Knowledge Among Primary PGCE student Teachers**

The improvement of student teachers' Mathematical content knowledge has challenged teacher educators for many years and studies (Corocan, 2005, Goulding, 2003, Morris, 2001) have shown a correlation between high maths anxiety and weak pedagogical content knowledge. Ernest (1988: 294) and more recently Burghes (2012) show that "for teachers with lower levels of mathematical knowledge attitudes to the teaching of mathematics may be the more important attitudes, as it is these that are associated with a more creative, problem solving approach to mathematics." This is further developed by Attard and Northcote (2011: 30) as they write, "When good pedagogy drives the incorporation of technology into mathematics teaching and learning, ICTs have immense potential to enhance student experiences with mathematics." Nevertheless, Pierce and Ball (2009) have shown that ICT has not always been the panacea of educational practice. Hlodan (2010, cited in Carr, 2012: 279) highlights that, "Limited research exists regarding the potential use of the iPad in the elementary mathematics classroom." Clarke and Svanaes, (2014: 1) concur with Hlodan (2010) stating that there is a "significant gap in the literature on the impact of one-to-one tablets' use in education." Therefore, with such a diffusion of perspectives this study uses a mixed methods case study approach to measure the impact of mobile technology; specifically iPads, upon the mathematical content

knowledge and pedagogical content knowledge of primary PGCE student teachers. The researcher aims to address the following four questions;1. What areas of mathematics do student teachers find most challenging?2. Using iPads, which mathematical learning methods best improve the Subject Matter Knowledge (SMK) of student teachers?3. How can iPads be used more effectively to inform the mathematical Subject Matter Knowledge (SMK) of student teachers?4. How can the information gathered from answering the questions above be utilised effectively to inform the Technological Pedagogical Content Knowledge (TPACK) of teacher educators?

# Anne-Louise Agnew

## University of Technology Sydney, Australia

### Embracing Change - The Agile Teacher's DNA

The focus in education today is on the provision of learning experiences that prepare students for a globally connected future, where problem solving, divergent, computational thinking and the ability to be flexible in learning approaches are key indicators of success. Students are thought to learn best in an environment where innovative practices and opportunities for critical thinking are integrated into the classroom; and where teachers develop a high sense of adaptability, engaging students in creative and innovative learning activities. Considering the aforementioned, this paper reports on a recent Australian study, “Embracing Change – The Agile Teacher’s DNA” which investigated the characteristics of the agile teacher and the implications for practice, educational professional learning and teacher education. The study adopted a qualitative methodology using Grounded Theory and Narrative Inquiry methods to reveal the personalised understandings and reflections of participant teachers and the association of emerging technologies in the development of their practices. The focus was primarily from a socio-cultural perspective, exploring practices, social, cultural and environmental factors affecting agile teachers. The study explored the factors that influence the emergence of “agile” characteristics and practices, the methodologies and strategies that influence adaptability, and the relationship between the development of agile characteristics and the

use of emerging technologies. The foundation for the study was the interplay between technology, pedagogy and innovation, focusing on the premise and understanding that innovation is the renewal or creation of processes that are effective and add value to existing practices. The intended audience for this paper includes a wide group of stakeholders in education, including policy makers, the individual education sectors, practitioners and indirectly, students, encouraging a broader understanding of the significance and implications of adaptability, curiosity and tenacity in teaching and learning. The findings of the study reveal the complexities of identifying the characteristics of the agile practitioner and the implications for practice and educational professional learning, providing insights into how and what the ‘agile’ teacher thinks, as well as what they do and say. The notion of agility is one that would be beneficial in pre-service teaching programs, encouraging a more divergent approach to pedagogy and the development of learning activities. The concept of agile pedagogies and practices aligned with the affordances of using mobile technologies to reshape learning will be explored further as essential elements of teacher education.

# Theresa A Cullen

## University of Oklahoma, USA

### Measuring the Outcomes of a 1 to 1 Teacher Education Program

To assess the outcome of 1 to 1 program in teacher education, we surveyed all of the students who have graduated from our teacher education program since 2013, the first class that received an iPad. We used the Five Best Practices model used by Apple previously for the Apple Distinguished Schools Program. We asked alumni about their experience as a college student and how it prepared them to be both teachers and leaders in their schools. We asked if they felt it prepared them to use technology with their students and how they felt about the program overall. They were asked a series of survey items based on the five best practices and then given additional opportunity to share their experiences. We found that 87% of them still have their iPad and 97% of them still use the iPad regularly. We found that they are viewed within their schools as someone who knows about technology. We also found that it helped them to use technology better with their students and feel more confident in their instructional choices. 89% of the respondents said that they felt being part of a 1 to 1 iPad program made them more likely to use technology as a teacher. They felt they were better prepared than their peer teachers who did not have the one to one experience (81%). The program made them more open to professional development and more willing to try new technologies. Alumni were able to share open ended comments as well. Theme analysis will be shared, but one example comment, shows how the one to

one iPad program affected their future teacher development, “Having tried my hand at engaging students with technology? Many of my peers didn't have this, and had to learn while trying to be a new teacher (which means they didn't learn very much; new teachers have no time for such). I even thought I was fine with technology, but it got me out of my comfort zone and really think about how my classroom could benefit from these tools.

# Ciarán Ó Gallchóir & Oliver McGarr

## University of Limerick, Ireland

### Exploring Pre-service Teachers' Justifications for an iPad Technology use in schools

The educational system in the Republic of Ireland (RoI) places a strong focus on technology integration. This is reflected in several national policies that emphasise the integration of technology in schools (Department of Education and Skills, 2015). However, there are growing concerns that the adoption of ICT in schools is superficial in nature; supporting pedagogical practices that are quite teacher-centred rather than student-centred (Aslan & Zhu, 2016; Tondeur et al., 2016). Pre-service teachers are seen as central in efforts to embed technologies in schools as it is argued that they are the first generation of teachers to have experienced the use of technology as part of their own schooling (Tezci, 2011). This study aimed to explore how pre-service teachers justify the introduction of an iPad initiative in schools. In order to achieve this, we presented 23 pre-service teachers with a vignette. The vignette tells the story of a school that has decided to implement a school-wide one-to-one tablet initiative. The pre-service teachers are asked to assume the role of the teacher and to justify the initiative during a parent – teacher conference. Two key findings emerged from this research. Firstly, the pre-service teachers tended to justify the initiative as they saw the increasing technification of schools as inevitable. This inevitability discourse drew from broad references to a futuristic society and ‘rapid’ advances in global media. The incorporation of technology into the classroom appeared as a necessity in ‘keeping up’

with these developments and not incorporating technology was viewed as a disservice to the pupils. Secondly, the pre-service teachers presented quite pragmatic reasons for the use of technology rather than their educational/ pedagogical value. These justifications were generally framed in terms of health and safety benefits for pupils, ease of access and the reduction of costs associated with these resources. This study reflects the findings of Tondeur et al. (2016) as the pre-service teachers’ responses suggested that the use of technology appeared to support existing pedagogical practices rather than changing the culture of teaching and learning to more innovative student-centred inquiry. Key questions raised by the findings are; while initial teacher education (ITE) programmes encourage the use of ICT, to what extent are these programmes challenging the students’ perceptions (and misconceptions) about technology? Should ITE do more to help pre-service teachers question innovation-centric discourses? Does the absence of a more critical perspective reflect a lack of experience using technology in their practice?

# E. Whewell, R. Heaton & H. Caldwell

## The University of Northampton, UK

### How does mobile technology facilitate teachers to learn outdoors?

This paper uses the data collected from an Erasmus + project entitled Digital Leaders Across Boundaries (DLAB) to suggest ways learning is facilitated through collaborative online tools. The DLAB project that informs this paper invited academics, teachers and students from four European countries to collaborate on a three year project, the first year of which focused on technology outdoors. The project resulted in three intellectual outputs, a four week MOOC, Google plus community posts and a project website. Entering the second year of the project it was clear that the visual nature of posts in the Google plus community aided access to content, they provided a hook for other community members to adapt, develop and reuse ideas. We use this paper to focus on how the Google plus community and MOOC content facilitated the evolution of participant ideas. We code and track the content of visual posts to elicit how connections spread. This analytic process revealed there were a number of observable ways that ideas were developed, disseminated and redirected online. These occurred through modelling and transferring skills to practice (Ortlipp, 2008), through collaboration, where learning is facilitated through appreciation (Caldwell and Heaton, 2016) and through mapping and connecting cognitive, pedagogical and practical ideas and experiences (Heaton (pending) 2018; Naidu, 2012). The intercultural, interdisciplinary and self directed learning

experiences online engagement facilitates also strengthened the development and dissemination of participant ideas. Through the findings in this paper we exemplify, by exposing idea mapping, how the most effective posts allowed ideas to evolve by drawing relationships between cultures, disciplines, pedagogy, practice, visual content and the participants original offering or idea. Sharing and mapping ideas facilitated collective knowledge building in the community and the Google plus community posts amplify the knowledge seeded in the MOOC content.

# Beth Holland

## Johns Hopkins University, USA

### From Teacher Education to Opportunity to Learn - Creating the Conditions for Teacher Innovation

Few moments in history have created such a catalytic moment in education as the current influx of technologies. The immediacy and ubiquity of access to information afforded by mobile devices allow anyone to become a learner from anyplace, at any time, and from anyone, directly contradicting many of the structures on which schools base their identities (Collins & Halverson, 2010). Today, educators face an era characterized by rapid advancements in technology, global connectedness, and a knowledge-based economy (Levy & Murnane, 2013). Unfortunately, researchers have consistently documented the systematic rejection of technologies to transform students from passive recipients of information to knowledge constructors as educators cling to previously held teaching strategies (Cuban, Kirkpatrick, & Peck, 2001; Cuban, 2017; Frank, Zhao, & Borman, 2004; Reich, Willett, & Murnane, 2012; Zhao & Frank, 2003; Zhao, Pugh, Sheldon, & Byers, 2002). To remedy this problem, both teachers and leaders need the opportunity to engage in the types of learning experiences that they hope to implement for their students - a key tenet driving the author's current research study. Most educators formed their perception of education as students within a largely behavioristic, transmission-as-teaching, analog system. Therefore, many reject the culture of active-learning and student creation that accompanies new technologies and do not view the adoption of these pedagogies as

necessary components of their conceptualization of an effective teacher (Ertmer & Ottenbreit-Leftwich, 2010). Even when provided with a mental model such as TPACK (Mishra & Koehler, 2006), many resist acculturation into the digital world and continue to espouse the values associated with more traditional pedagogical approaches. Since individuals create knowledge through active and vicarious experience (Bruning, Schraw, & Norby, 2011), the challenge for educational leaders, as well as teachers of educators, lies in the design of opportunities to build new mental representations about teaching and learning (Ertmer & Newby, 1983). Instead of traditional, transmission-based professional development or teacher-education programs that perpetuate existing mental models, educators need opportunities on which they can socially construct new meaning (Gee, 2008). Educators and leaders need to have that initial experience on which they can then design new practices. They need an opportunity to seek out problems, design novel solutions, construct new knowledge, and create dynamic representations of their understanding as learners. To create the conditions for their students to engage in active learning and harness the power of mobile devices, teachers and leaders first need to experience a similar environment for themselves.

# Farrell, R. Brown, M., McNamara, G., O'Hara, J. & O'Brien, S. University College Dublin

## Testing a model of CPD for the introduction of ePortfolios in Irish Education. (2017)

The use of ePortfolios to enhance the quality of education has become increasingly important in Europe and elsewhere. In the case of Ireland, there is real commitment to exploring ways in which ePortfolios can enhance teaching and learning across the continuum of education. At a policy level, the Digital Strategy for Schools 2015-2020 (Department of Education, 2015) outlines a range of engagements with e-portfolios including the provision of a freely available online training on ePortfolios and assessment to all registered teachers in Ireland through [teachercpd.ie](http://teachercpd.ie) In addition, as part of the Department of Education's ongoing commitment to exploring the use of ePortfolios in Education, PDST and PDST - Technology in Education have tested a model of ePortfolio support at transition year level with 40 Post Primary schools throughout Ireland. In this paper we provide a description of the CPD model of support that was provided to participating schools that consisted of capacity building through online training, face to face workshops and follow-up visits to ePortfolio schools at various junctures within the lifecycle of the 2-year project. Second, we provide an evaluation of the project that was carried out by EQI- The Centre for Evaluation, Quality and Inspection. It is envisaged that the results from this project will allow various stakeholders such as the Department of Education, sectoral support services, Initial Teacher and Further Education providers and other interested

organisations to enhance their understanding of the issues, mechanisms, training supports, and the value added attached to the systemic introduction of ePortfolios in Irish education.

# Tony Sweeney

## Froebel Department, Maynooth University Ireland

### **Title: Writing and iPads in the Early Years: Perspectives from Children and Teachers**

The aims of this study were: to garner the views of children on their use of iPads for writing in the classroom and to ascertain the views of teachers on the benefits and challenges of using iPads to teach writing in the early years. Tablet devices have a growing popularity in children's digital lives (Ofcom, 2014) and the use of tablet devices is seen as one of the 'hot trends' for technology adoption in schools. Writing is a complex, effortful activity and many children lack motivation when asked to write. Researchers have discussed the potential of digital technology to transform the education process, such as the teaching of writing, and it is the enabling of flexibility, choice and creativity that can promote new practices (Lynch & Redpath, 2014, McTavish, 2014). This project which was funded by ScoTens, and was undertaken in six primary schools in Northern Ireland and the Republic of Ireland during the 2016-17 school year. The research takes a constructivist approach viewing people as dynamic, social beings who interact with others to construct joint meanings within a given context (Greig et al., 2007). Semi-structured interviews with class teachers, focus group interviews with children, virtual tours of the iPad by the children and classroom observations of iPads being used for writing were used to gather data. The EECERA Ethical Code for early childhood Researchers (2014) was followed with voluntary, informed consent sought from teachers, parents and children and ethical approval was granted by

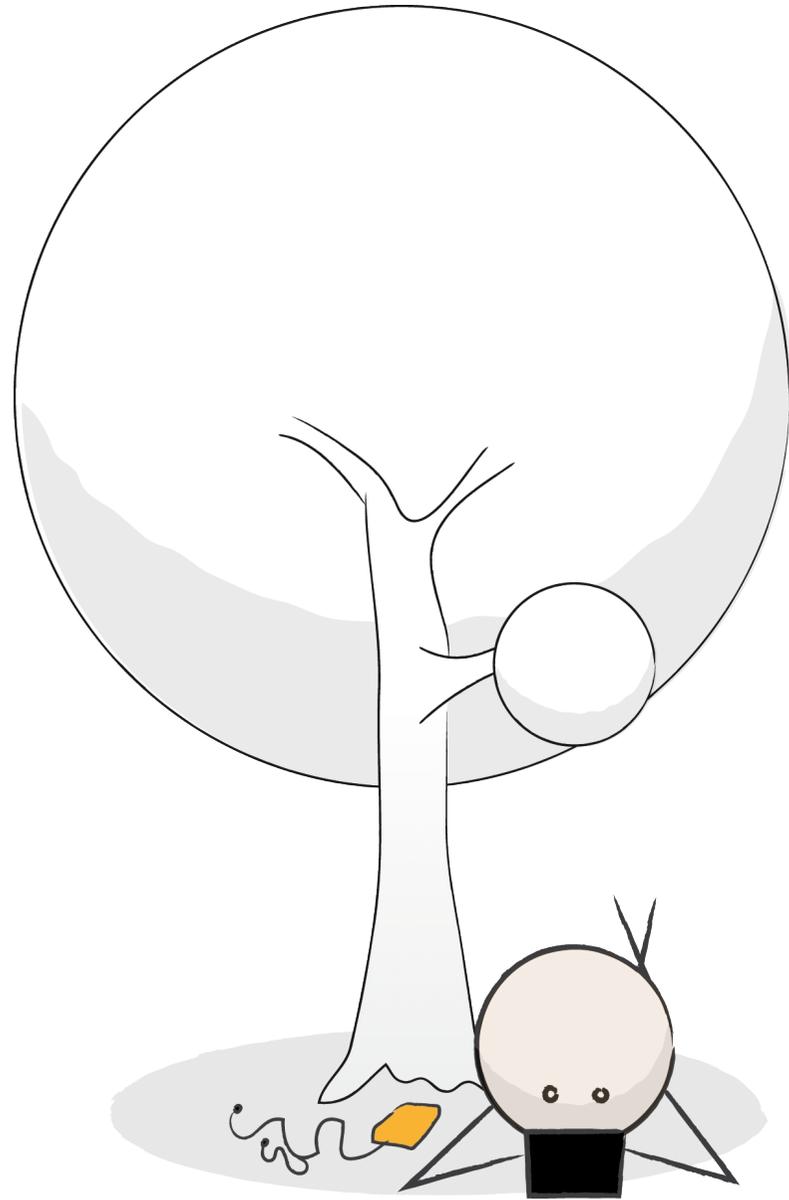
both of the partner institutions. Initial findings indicate strong advocacy from both children and teachers for the use of iPads to teach writing but in a balanced approach alongside more traditional writing. These findings can add to the way forward for technology and education. Keywords: iPads, writing, children's voices, early years, technology

# Cassandra Kelley

## University College Dublin

### **Enhancing Student Teachers' Reflective Practice through iSupervision Virtual Observations**

Research suggests that reflective practice is a vital component in progressing from novice to expert (Cochran-Smith & Lytle, 1999; Dewey, 1933; Jones & Jones, 2013; Pedro, 2005; Schön, 1983; Zeichner & Liston, 1987, 1996). In the CalStateTEACH online and site-supported teacher preparation program, candidates are placed in clinical experiences while their assigned faculty conducts in-person and virtual observations to monitor their progress (CalStateTEACH, 1999). CalStateTEACH focuses on self-reflection that utilizes digital video for growth and development. Through the “iSupervision” application, candidates are given the opportunity to showcase specific moments of their teaching and embed reflective annotations, while faculty provide feedback directly within specific timestamps. Analysis of recorded lessons promotes sophisticated levels of reflection while building student-teacher confidence (Jones & Jones, 2013; Pedro, 2005; Zeichner & Liston, 1987, 1996).



# Short Paper Tract

# Marguerita MCGovern

## NUI Galway, Ireland

### Click and Be Informed

Touch, Click and be Informed: Making a series of multi-touch ebooks to Support placements. This exciting project set out to develop a series of seven 'wraparound' multi-touch electronic ebooks to support the placement experience within a professional social work training course. The main focus concentrated on developing and presenting multi media content in the form of aural and visual podcasts accompanied by academic research in order to demonstrate how the social work practicum experience could be enhanced. The paramount aim was to capture the wisdom of practice teachers, social work students, tutors and topic specific experts in verbal (downloadable through podcasts) form and present this with relevance to research and theory with a view to enhancing the placement experience. It was also important to use the ebooks as a resource for pre-placement training by additionally incorporating downloadable slide presentations towards the end of each ebook. This presentation will suggest that this innovative approach can be adopted within any course with a placement experience wrapping around the wisdom of the innovative visual and aural podcasts and up to date research.

# Aine Moran

## Le Chéile Secondary School, Tyrrelstown, Dublin, Ireland

### **It's your call - Personalised Learning in Practice**

Le Chéile Secondary School have devised and implemented a timetabling strategy that allow Transition Year students to choose when and at what pace they study their core subjects. This strategy has been made possible as the students use one to one devices. Students use an online booking system. Teachers have prepared some online content, are available for one to one support work, provide opportunities for online forums both within the school and further afield.

# Jens Palkowitsch-Kuehl

## University of Würzburg, Germany

### Exploring faith in virtual and augmented spaces

A case study about integrating VR/AR in religious educational learning and teaching scenarios and the teachers attitude towards those accompanied mobile technologies. This contribution will show two possible learning and teaching sequences using mobile technologies: First, virtual realities (VR) augmented by representations of physical reality, thus enabling virtual expeditions, and second, physical realities augmented by virtual overlays (AR), creating experiential spaces in existing locations or new, non-location-bound, learning sites. This case study is a part of a wider project RELab digital, which is dedicated to the development, testing, and evaluation of learning scenarios in Religious Education (RE) classwork, and to answer questions regarding the benefits and opportunities through using mobile technologies in classrooms from the teachers view. Education in general participates in globally occurring medial transformation processes. RE and Didactics, like all other academic disciplines, are challenged to conceptualize and reflect the integration of digitally-networked media in theory and practice. This should happen in at least three dimensions: in learning with digital media, in learning about digital media, and in the development and practice of a constructive/critical media education. Usually, in RE more traditional educational material like books, primarily the Bible, texts and films are used. The subjects of these

mostly focus on a rather ancient representation of religions which is, of course, necessary for RE. Against the background of the 'internet' and the results of changing cultural techniques and the changes of culture itself, it is indispensable to broach the issue of transformation of religion in educational media. Faith therefore becomes visible in many varieties and platforms. This also leads to an integration of digital-networked and mobile technologies in RE, for investigating and creating. As a first step, in the didactical/methodological conceptualization of teaching and learning sequences, existing didactic models like the SAMR Model (Puentedura 2012), TPACK Model (Koehler et al. 2014) and the iPAC Framework (Kearney et al. 2012) were explored and ways were found to make them useful for RE. In the following, learning sequences were build up on those didactical principles. On the one hand virtual realities (VR) will be expanded by imagings/ images of physical reality, enabling virtual expeditions to physically existing locations using the software ThingLink. The second example shows how physical reality is expanded and augmented by virtual spaces (AR), creating new learning sites not bound to any location using the APP Actionbound. The focus on these scenarios is not just on consuming these learning spaces but also to let the learners built them up by themselves.

# Matt Glowatz

## University College Dublin

### **Academic Engagement and Technology: Revisiting the Technological, Pedagogical and Content Knowledge Framework (TPACK) in Higher Education (HE): The Academics' Perspectives**

Research into the use of innovative information and communications technology (ICT) for academic purposes is growing quickly. Much of the current research explores the opportunities presented by ICT and social media as innovative tools for teaching and enhancing student learning (O'Brien & Glowatz, 2013; Duncan & Barczyk, 2013). This paper suggests that the role of the academic in navigating the use of ICT in their teaching in Higher Education (HE) has been overlooked in discussions. Koehler and Mishra (2009) propose the technological, pedagogic and content knowledge (TPACK) framework to explore the relationship of technology in teaching. O'Brien and Glowatz (2013) investigate the suitability of the TPACK framework in the context of academic engagement in order to investigate its relevance for academics teaching in HE. This paper suggests elements of the teaching dynamic are overlooked and evaluates the use of the TPACK framework in the exploration of technology in higher education by academics. Specifically, the authors address the key question 'How do academics currently make use of technology to teach at higher education?'.

# Ray Kirtley

## University of Hull, UK

### Girls into Global STEM

Girls into Global STEM This Erasmus Key Action 2 project (2016-19) involving the UK, Cyprus, Poland and Sweden is aimed at developing a methodology which inspires more girls to consider STEM careers. Each country is represented by a university and/or NGO working with a partner secondary school. In year 1 the focus has been on trialling four 'Global STEM Challenges'. These fit into curriculum areas across Europe not only in science but also in IT, geography and citizenship. Each one is drawn from a Sustainable Development Goal: Zero Hunger Clean and affordable energy Sustainable cities and communities Climate Action The 'challenge' in Year 1 was for older students (15-16) to develop activities for a younger cohort (12-14). These activities bring together science, global issues and mobile technologies and current thinking is that they will inspire pupils to think how science and technology can provide practical, often low-cost answers to important global issues. We have devised surveys for our school students both before and after the practical work and are currently analysing the results for both boys and girls. The project teams used mobile devices to capture digital assets during the trials then brought together their work in a series of eBooks. These books plus other project materials form the nucleus of both pre-service and in-service training formats which enable teachers and teacher educators to replicate and

enhance the methodologies described above. See [www.gigsproject.eu](http://www.gigsproject.eu) for further details.

# Rachel Farrell & Martin Brown

## University College Dublin

### Have smartphone destroyed the "iGeneration" in Ireland?

Jean M. Twenge, Professor of Psychology at San Diego State University is the author of more than 130 scientific publications and 6 books, including *iGeneration - Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood*. A recent article about the book published in *Atlantic* magazine took Twitter by storm. It painted an almost apocalyptic picture of the effects on children and teenagers posing the question - "Have smartphones destroyed a generation?" According to Twenge the iGeneration that has grown up with smartphones is physically safer than teens have ever been. They have less casual sex, are less likely to get into a car accident, and tend to drink less. But psychologically, they are much more vulnerable than their predecessors. She says rates of teen depression and suicide in the US have soared in recent years. "It's not an exaggeration to describe iGen as being on the brink of the worst mental health crisis in decades. Much of this deterioration can be traced to their phones," says Prof Twenge. The psychologist warns that increased screentime anytime, anyplace, anywhere is linked with growing isolation and depression. She says teens who spend three hours a day or more on electronic devices are 35pc more likely to have a risk factor for suicide. So, are these trends replicated in Ireland, where young teenagers are also wedded to smartphones? This paper will discuss

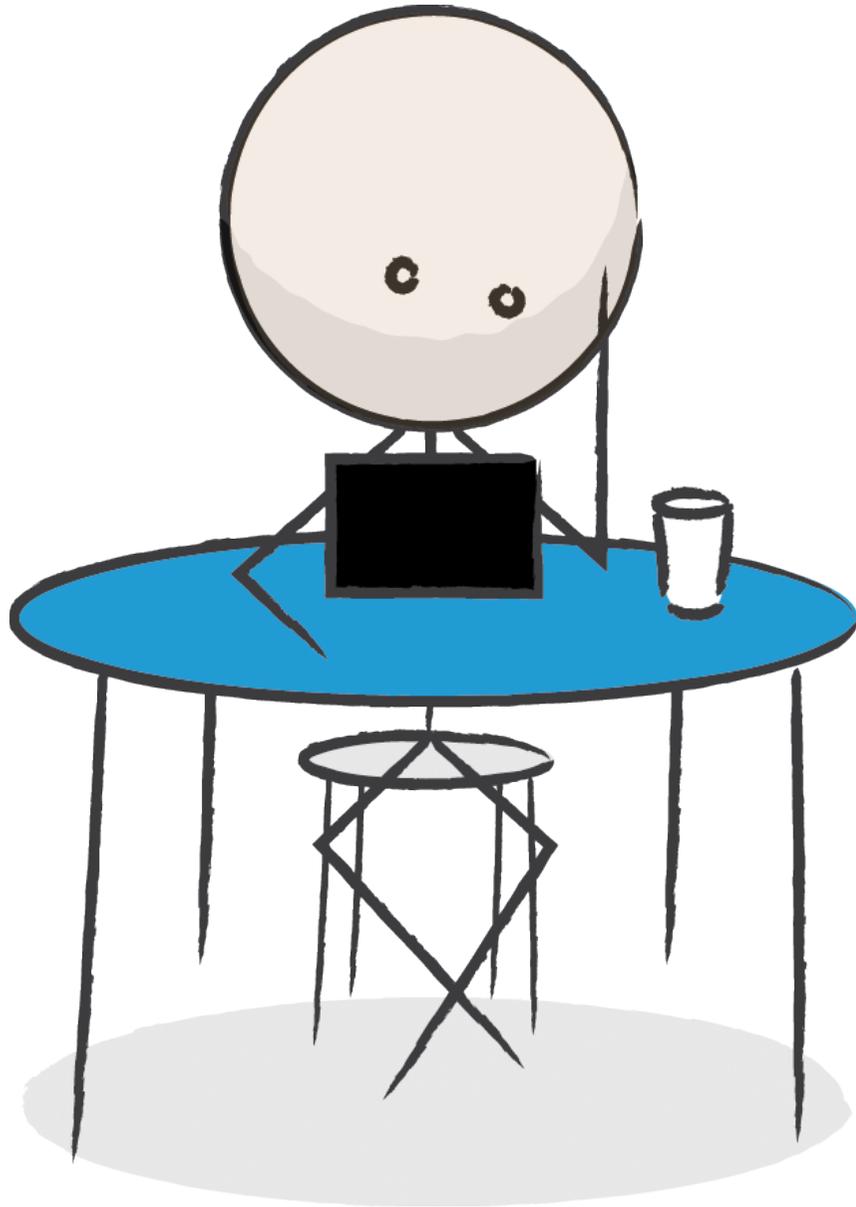
the results of a national survey of post primary students born between 1995 and 2012 (iGeneration) to see if the grim picture painted by Professor Twenge which relates to America applies to the Irish context and the implications for ITE providers in preparing pre-service teachers to deal with these challenges.

# Ronan Connolly

PhD Candidate, National University of Ireland Galway

## **Towards a Virtual Gaeltacht: Designing an immersive, online environment for overseas Irish language students**

While the number of Irish speakers in Ireland continues to decrease, overseas interest in the language steadily grows. However, there exists few resources online whereby overseas students can communicate, collaborate and create with fellow Irish language learners in a fully-immersive setting. This research aims to develop a substantive online space where Irish language skills can be developed and enriched amongst a community of language students and specialists.



# Saturday Workshops

# Sketchnoting on iPad: visualising listening & synthesis

Reshan Richards

## Workshop Description

Doodles, diagrams, images, and their contextual position can both capture and convey messages and meaning in ways that text and words alone may not be able to. We'll explore approaches that students and teachers can use for visualizing ideas and demonstrating understanding through sketchnotes, whiteboarding, and reflective screencasting.

## Facilitator

Dr. Reshan Richards is adjunct assistant professor at Teachers College, Columbia University and associate at Columbia University's School for Professional Studies. He is also Chief Learning Officer at Explain Everything, which he co-founded. An Apple Distinguished Educator and member of Mensa, Reshan has an Ed.D. in Instructional Technology and Media from Teachers College, Columbia University, an Ed.M in Learning and Teaching from Harvard University, and a B.A. in Music from Columbia University.

# The Magic of Green Screen Film Making in the Classroom

Cormac Cahill

## Workshop Description

Green Screen Film Making is no longer something you have to wait for the next Hollywood Blockbuster to see. Now it can be accomplished in your classroom using just the iPad, a simple to use app and a green surface. Transport your students to far away lands or planets, take them back in time or explore the future. This workshop will show you how to easily set up a green screen film making studio in your classroom. Rest assured there will be lots of fun activities involved.

## Facilitator

Cormac is a Primary School teacher working at Carrigaline Educate Together National School in Cork. He is also an Apple Distinguished Educator (ADE) and an Apple Education Trainer (AET).

# GarageBand: Not just for Music Class...

Eoin Hughes

## Workshop Description

GarageBand on iPad enables teachers and students to create music and perform in the classroom using virtual touch instruments and loops. However, Music teachers are not the only ones who should get to have all the fun.

This workshop will focus on using GarageBand to create expressive, professional sounding music which could be used in a range of multimedia projects. Attendees will also learn how to use GarageBand in other areas of the curriculum, such as English, History and Languages. Please bring your iPad with GarageBand preinstalled.

Warning - This will be a lot of fun!

## Facilitator

Eoin is a Geography and Music Teacher and the ICT Coordinator in Loreto Abbey Secondary School, Dalkey, Co. Dublin. He is an Apple Distinguished Educator (ADE), a Book Creator Ambassador and an experienced musician.

# Enhancing Assessment for Learning with iPad

Greg Hughes & Chris Greer

## Workshop Description

This interactive workshop will explore the potential of using iPad to enhance and transform Assessment For Learning, using a variety of tools and approaches combined with pedagogies viewed through a digital lens. iPads will be provided for this session.

## Facilitators

**Greg** is Vice Principal - Learning Technologies & Curriculum at The de Ferrers Academy, UK, an Apple Distinguished School and Apple Regional Training. He is an Apple Distinguished Educator Apple Education Trainer and a member of the ADE and RTC advisory boards. Greg has taught Physics for 30 years and has travelled extensively delivering keynotes and workshops on STEM, digital technology and educational leadership.

**Chris** is a Professor of Instructional Technology at Georgia College, specializing in multimedia production and classroom integration. He was selected as an Apple Distinguished Educator in 2015 and has recently released a multi touch textbook in conjunction with the Georgia Department of Natural Resources. He has delivered iPad integration workshops to schools throughout the state of Georgia.

# Apple Classroom

Mat Pullen &  
Catherine Mangan

## Workshop Description

This workshop will help teachers understand how to begin using Apple Classroom. We will show how to add students to a class create groups and manage the learning in your classroom. Classroom ensures that every child remains on task, you can view their screens airplay their work and launch apps, books and websites easily. Classroom turns your iPad into a teaching assistant!

## Facilitator

**Catherine** is Head of Digital Learning at Thomas's Fulham. Prior to taking up this role she implemented iPads in her primary school and helped the change the landscape of education for her pupils. She is an Apple Distinguished Educator Class of 2013 & is a member of the Apple Distinguished Educator advisory board for EMEIA

**Mat** is a Senior Lecturer in Initial Teacher Education in the University of South Wales. He specialises in the delivery of technology enhanced learning specifically in the field of Science. Having taught at both Primary and Secondary level he has seen how technology can transform learning opportunities for different learners.

# Introduction to Coding (Swift Playgrounds)

Michael O’Kane & Miriam Walsh

## Workshop Description

Learning to code is extremely important as it helps to develop key essential skills like problem solving, logical thinking and computational thinking. In this session we’ll take a look at the fantastic Everyone Can Code curriculum and how the Swift Playgrounds app can introduce coding concepts using Swift code. Attendees will also get hands on with the Sphero SPRK+ and will program it using Swift Playgrounds and see how it can be used in cross curricular activities.

## Facilitator

Michael is a primary school principal in Ireland and an Apple Education Trainer specialising in coding.

Miriam is a further education teacher focusing on coding and digital media. She is an Apple Distinguished Educator and ADE Advisory Board member for EMEIA. She also manages Apple Regional Training Centre Cork.

# Advanced Keynote for Mac

Bill Rankin

## Workshop Description

This course will walk you through some of the ways Keynote can be used to animate and illustrate, addressing techniques for going beyond the basics. In addition to exploring the rationales and methods for making Keynote animations, attendees will also gain access to a collection of pre-built samples that they can use, reverse engineer, and adapt.

## Facilitator

Bill developed and honed his Keynote skills prototyping imaginary iOS apps for a 2008 video about mobiles in higher ed (before there was even an App Store!), and he continues to explore ways to use this powerful animation and presentation tool to convey a broad range of visual messages. He has taught Keynote to educators for almost a decade and his Keynote and presentation skills course is a central part of Apple's Developer Academy curriculum. And Apple Distinguished Educator, Bill was a university lecturer for 25 years and served as Apple's Director of Learning from 2013–2016. He is now an independent learning consultant with Unfold Learning, which he co-founded with Bea Leiderman.

# Intro to iBooks Author: Workshop

Fons van den Berg

## Workshop Description

There has never been a better time for teachers to create and distribute engaging, interactive learning materials. Teaching and learning with iPad doesn't mean you have to leave behind all the great learning resources you have created for your students through the years. Learn a quick and easy way to find additional digital materials and how to 'do the right thing' with Copyright and Creative Commons. Go hands-on with iBooks Author and transform existing learning materials into interactive digital books that provide engaging learning experiences which can be used on your student's iPad.

## Facilitator

Fons van den Berg is a former teacher turned professional development specialist at See Genius. As an Apple Education Trainer and consultant he supports schools in transforming teaching and learning in 1:1 environments. The 'whole school' approach he takes connects contemporary visions on learning, engaging pedagogy and learning content and sensible use of technology in vibrant learning spaces.

# Teaching using iTunesU! - Activity based learning

Johan Andersson

## Workshop Description

What do we need to consider even before getting to what we are good at - pedagogy?

Students and our own thoughts about ability and intelligence - can we build a workflow that is interesting and keeps the students motivated. Using our own knowledge and considering what we have learned from other sciences, how do we think around expression and motivation when we build our lessons. Why should we and how can we use a digital tool to implement all this and why iTunes U as your workflow instrument.

A. Looking at an iTunes U course.

B. Integrate Interactive textbooks into your course (and learn a bit of Swedish!).

## Facilitator

Johan Andersson (PhD) is a Swedish science teacher and Advisory Board Member EMEIA for Apple Distinguished Educators. Having implemented Apple technologies within his own classroom he became passionate about finding an alternative for the traditional textbook within the education system. He teaches a classroom where everyone will feel at home. He decided that technology has changed the role of the textbook as we know it, and tries to share his visions with schools within and outside Sweden. As a true global citizen who lived in the UK, Russia and the US, Johan previously was a professional dancer who performed on National Swedish television.

# 'Clips' for Video making in the Classroom

Eoin Hughes & Michael Mills

## Workshop Description

Clips is an iOS app for making and sharing videos with text, effects, graphics and music. Despite being a relatively new app, Clips has been embraced by teachers and students using iPad in the classroom due to its ease of use, wide range of features and variety of applications across the curriculum. Clips exemplifies the notion that the most powerful digital tools are often the most simple; allowing more time for learning. Attendees will learn how to use Clips to make and edit videos on iPad to support oral language skills, document and make visible learning in different subjects and create flipped learning videos.

## Facilitators

**Eoin** is a Geography and Music Teacher and the ICT Coordinator in Loreto Abbey Secondary School, Dalkey, Co. Dublin. He is an Apple Distinguished Educator (ADE), a Book Creator Ambassador and an experienced musician.

**Michael** is a leading expert on the practical uses of mobile technology technology, particularly on using collaborative tools to better engage students and to design strategies for effectively integrating mobile devices in the classroom. He is an SXSWedu, ISTE, and SITE presenter, has been recognized as an Apple Distinguished Educator and Google Education Trainer, and has served on the advisory boards for SXSWedu and the Apple Distinguished Educator Program for the Americas.

# Lasting, personal feedback with Explain Everything

Reshan Richards

## Workshop Description

The roots of assessment come from two people sitting down together and coming to a mutual and confirmed understanding of the current state and charting a meaningful path to a desired future. In schools, it is not always easy to construct such moments. However, emerging technologies that allow educators to capture ideas, comments, and moments through media may help to bridge constraints of distance and time.

## Facilitator

Dr. Reshan Richards is adjunct assistant professor at Teachers College, Columbia University and associate at Columbia University's School for Professional Studies. He is also Chief Learning Officer at Explain Everything, which he co-founded. An Apple Distinguished Educator and member of Mensa, Reshan has an Ed.D. in Instructional Technology and Media from Teachers College, Columbia University, an Ed.M in Learning and Teaching from Harvard University, and a B.A. in Music from Columbia University.

# Apple Teacher

Terri Cullen & Lucy Gray

## Workshop Description

This course will introduce and explore how the Apple Teacher program can be used with future teachers and for professional development of both college professors and practicing teachers. We will discuss how Apple Teacher works and how it can be used to in a variety of ways within teacher preparation curriculum and how it can be leveraged as support for content creation projects.

## Facilitators

**Lucy** is an experienced consultant and observer of educational innovation, working with a variety of people and institutions on modernizing education. She is a frequent speaker and workshop presenter at conferences, and her projects include professional development coaching, virtual conference development, strategic planning for schools, and consultation to companies and non-profits.

**Theresa** is an Associate Professor at the University of Oklahoma where she coordinates the undergraduate technology integration courses and the 1 to 1 iPad Program for future teachers. Theresa is a member of the working group for the refresh of the International Society for Technology in Education (ISTE) leader standards and will be the 2019 Research Chair for the ISTE International Conference in Philadelphia, Pennsylvania, US.

# Stop motion : Animation for Learning

Peter Baxter

## Workshop Description

This course will demonstrate the potential of stop motion animation as a great way to incorporate various curriculum subjects and themes while encouraging students to collaborate and create on projects. iPads are an ideal tool to capture, edit and produce the films.

## Facilitator

**Peter** loves creative arts and media and is constantly busy making something. In 2001 he established Createschool and ever since he has been delivering workshops around Ireland encouraging people to collaborate and create using a variety of styles and methods.

Stop Motion Animation is a life long passion of Peter's and Createschool have been creating short films exclusively for their YouTube channel that are made for Irish Primary Schools. These films focus on Irish history, storytelling, myths, legends and more to help engage children and to inspire them to make their own.

Createschool have been using iPads in their workshops since 2009.

# Changing Mindsets : Mobile Methodologies in the Classroom

Catherine Mangan and Mat Pullen

## Workshop Description

The workshop will explore the opportunities that mobile methodologies present in the classroom. We will expose attendees to apps that facilitate mobile, collaborative and student lead learning from early years to upper secondary. We will explore assessment opportunities that are unique to the iPad classroom

## Facilitator

**Catherine** is Head of Digital Learning at Thomas's Fulham. Prior to taking up this role she implemented iPads in her primary school and helped to change the landscape of education for her pupils.

**Mat** is a Senior Lecturer in Initial Teacher Education in the University of South Wales. He specialises in the delivery of technology enhanced learning specifically in the field of Science. Having taught at both Primary and Secondary level he has seen how technology can transform learning opportunities for different learners.

# Reaching All Learners: iPad Accessibility Features

Jamie Johnston (Wriggle)

## Workshop Description

Every students should be able to create, work, learn and play on the iPad no matter their barrier to learning. This workshop aims to; inspire educators, raise awareness of the powerful assistive features that are built into the iPad and give concrete ideas to take away and use in the classroom.

## Facilitator

Jamie is an AET hailing from Scotland. He has over 6 years experience in teaching, 3 of which were in the first Apple Distinguished School in the middle east - Repton School Abu Dhabi. He now works at Wriggle as teacher engagement manager.

# Scrum: A Framework for Effective Collaboration

Bea Leiderman

## Workshop Description

Teachers in Goochland County have adapted Agile Scrum to help students develop communication, collaboration, and time management skills. In this session, attendees will learn about the basic artefacts and procedures of a project executed using Scrum. Bea will share examples of projects and conversations with students and teachers in which they share their experiences with Scrum.

## Facilitator

Bea is an Instructional Technology Coach in Virginia, USA. She is an Apple Distinguished Educator, class of 2009, and co-founder of Unfold Learning, an educational consulting and training firm. Her recent efforts to adapt Agile Scrum as a method for teachers and learners was highlighted in ISTE's Entrsekt magazine in June of 2016, and she has shared her expertise in Scrum with teachers at regional, national, and international conferences. In her spare time, Bea likes to take pictures of bugs. Her macrophotography appears regularly in Flickr's 'Explore' pool, and she has 6 educational books about insects on the iBooks Store.

# Production Studio in a Backpack

John C. Ittelson & Michael Slade

## Workshop Description

A full production studio can fit in a backpack yet have the production capabilities of studio costing many thousands of dollars. In this workshop we will demonstrate MimoLive Reporter, MultiCam and Live:Air which are used for recording and streaming of multiple iOS devices when a single camera is not enough. We'll show a simple setup and things you can do to expand the setup.

## Facilitators

**John** is a Professor Emeritus of Information Technology and Communications Design at CSUMB. John is an Apple Distinguished Educator (ADE) class of 2000. Currently John's primary interest is in ePortfolio development and serves as a senior consultant to the CalStateTEACH Project. John was Co-chair of MiTE 2017 Conference in Los Angeles, CA

### **Michael**

Instructional/Multimedia Developer at the California State University, Office of the Chancellor. Michael is an Apple Distinguished Educator (ADE) class of 2013. Michael's primary focus is in using multi-touch books to create seamless course experiences for the CalStateTEACH Project.

## Storytelling in 360

Jordan Schugar & Chris Penny

### Workshop Description

This workshop will focus on digital storytelling — using digital tools to tell stories of everyday people for educational purposes — with an emphasis on 360-degree video and cameras. The session will also address the role of virtual realities as they embody a constructivist learning approach because users are no longer beholden to predetermined viewing experiences but rather are afforded choice and agency. The session will begin with some general theoretical approaches and then transition to real-world tools and examples before ending with hands on experience creating short stories.

### Facilitators

An Apple Distinguished Educator since 2013, **Jordan** is an Associate Professor of English at West Chester University of Pennsylvania (USA). His research interests include reading comprehension (both digital and traditional), coding, makerspaces, and digital humanities. He teaches a variety of courses like basic and research writing, children's literature, and pop culture.

**Chris** is a Professor of Educational Technology and Assistant Dean at the West Chester University of Pennsylvania. In 2011 he won the Lindback Distinguished Teaching Award for his excellence in the classroom. His efforts in teaching and research have the focus of technology integration in education. Most recently this research has revolved around the topics of learning spaces, and coding for everyone.

# Dyslexic Provision through Apple Technology

Adrian Carey

## Workshop Description

This course will explore the role of iPads in effective provision for Dyslexic students. The workshop will focus on the school experience of those with Dyslexia and how the use of iPad technology can address areas of literacy and self-esteem.

## Facilitators

Adrian has over fifteen years experience as an SEN Teacher. He has recently completed a Postgrad in SEN at NUIG and 21Century Teaching in TCD. He is currently examining the role of technology in Dyslexic provision in schools.

# **My Notes from #MiTE2018**

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