Influencing policy and practice
The Association for Information Technology in Teacher Education
27, Old Gloucester Street, London, WC1N 3AX

ITTE 30th Annual Conference
Saturday 2nd July 2016

ABSTRACTS: Presented Papers & other sessions

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All linked files are PDF unless otherwise indicated.

KEYNOTE: Seán Ó Grádaigh: Digital Futures: Transforming Practice, Raising the Bar *(this file is very LARGE (63MB) and is external to the site)*

Paper Session 1 (11.05 - 12.15)

1.1 Tazmeen Sultan (11.05 - 11.20) (Presented via Skype)

TITLE: Emerging Use of ICT for Teaching and Learning in Schools of Pakistan

ABSTRACT:
ICT is very helpful for learners of today as they are the digital natives and technology comes naturally to them. Learning through ICT opens new pathways for these learners and stimulates their imagination for thinking and gives way to student centred learning.

Interactive online games and downloadable videos for simulation are an amazing resource for reinforcement of curriculum goals and a better grasp on concepts. Learners can self-

assess themselves through trial and error options, they can participate in quizzes and tests and enjoy the whole learning process.

Child friendly software such as 2Publish+, 2Create a Story and 2Animate cater to different learning styles and needs. Learners learn in collaboration and develop their reading, listening and speaking skills. Interactive videos are a good resource to polish their language, mathematical and scientific skills. They also help in improving their vocabulary and accent since English is not their primary language. Interactive videos generate good class discussions and help in understanding new concepts.
Moreover ICT is a great learning tool for these young learners. Learning takes place not only in school but also outside school environment through ICT. Self-learning enhances their experience, opening up new horizons to them. However, these learners need to be made aware of all the social, cultural and ethical issues related to technology for their own benefit.
The best part of learning through ICT is that it is fun; the learners are not burdened with making mistakes and presenting untidy work by frequent rubbing. In short learning remains fun throughout.

My learners grasped concepts and ideas through the use of web 2.0 technology. They learned to work in collaboration which gave way to creativity, development of social skills, ICT skills, team work and sharing, taking ownership and guided research. They were more focused on their tasks and found How to…Guides and ICT instructions really helpful and supportive. They were able to reinforce topics, self-review and assess their learning and make decisions while solving problems.

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NOTE: The programmed session 1.2 by Ileji and Gassama was cancelled on the day because, at the last minute, the presenters were unable to obtain entry visas. Chris Shelton kindly stepped in with his talk "From *Computational Thinking* to *Computational Participation*".

Abstract: Computational participation expands the idea of computational thinking to include personal expression and social participation.

It is "the ability to solve problems with others, design systems for and with others, and draw on computer science concepts, practices and perspectives to understand the cultural and social nature of human behavior." (Kafai and Burke 2014)

1.2 Poncelet Ileleji, Kebba Gassama and Christina Preston (11.20 - 11.35)

TITLE: Developing the infrastructure to support digital technologies in education in Gambia

ABSTRACT:
In this presentation two members of the MirandaNet Fellowship, leaders in the YMCA Computer Training Centre and Digital Studio, will talk about recent developments in the Gambia as they develop a digital technologies programme in the schools. The talk will expand on the infrastructure that is improving through the efforts of the government of the

Gambia in its attempts to take to take " Internet to the Last Mile" through the launching of the Sub Marine ACE Cable in December 2012 connecting The Gambia to a sub marine cable via the Africa Coast to Europe Sub Marine cable on the ACE cable which cuts across Europe to Africa.The ECOWAN project will also be discussed, financed by the Islamic Development Bank, in which fiber optic is to be laid across the country.
In terms of curriculum, out of the 40 plus state high schools over 20 have an ICT curriculum in place teaching basic ICT literacy.

Through another project funded by the World Bank Education called READ, the Ministry of Basic and Secondary Education is aiming for all public high schools in the Gambia to have access to Internet and also a full pledged ICT programme also integrated with curriculum.

However, professional development in digital technologies is not yet embedded in the teacher training colleges. For example, the Gambia College, the oldest teacher training institute in the country, still does not still have an ICT embedded curriculum for trainee teachers. This is a challenge these leaders will address in this presentation because they believe teachers should be ready prior to going into the classroom with the prerequisite knowledge of digital literacy. In dialogue with their audience they hope to establish how best to design an effective professional development programme in digital technologies for African teachers.

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1.3 Helen Caldwell and Jean Edwards (11.35 - 11.50)

TITLE: Teaching and learning beyond the institution: building an international community of practice on the theme of teaching with tablets

ABSTRACT:
This presentation will report on the creation and use of a MOOC on the theme of 'Teaching with Tablets', which took place in February/March 2016 with the aim of preparing educators across sectors to use mobile devices effectively in their teaching. A structured connectivist approach resulted in a 'hypbrid' MOOC design combining features of both x- and c- MOOCs in order to harness the power of learning in social settings with the advantages of structured content. The MOOC was designed to support an international group of trainee teachers, teachers in practice and other groups of education professionals across phases to build skills and expertise at using tablet devices to support teaching in the classroom and beyond. Registration numbers were 570 and 270 of these engaged with the online Google+ community that was associated with the course (https://plus.google.com/communities/108510780639510097712).

The presentation reflects on the combinations of technologies used within the MOOC, the nature of the community engagement and the perceived benefits as identified by the content creation team. We will share the successes and challenges we encountered in designing learning within online communities, and delivering CPD to an international audience of educators. Our preliminary findings are drawn from Blackboard Open Education statistics, analysis of weekly Twitter chats, analysis of interactions within the Google+ online community and from survey feedback from participants. This is supplemented by reflections from the project blog.

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1.4 Sarah Younie and Christina Preston (11.50 - 12.05)

TITLE: Learning online

ABSTRACT:
In this presentation some members of the award winning HANDSON ICT project discuss the successes and challenges of designing a MOOC. This project, funded by the EU LifeLong Learning programme aimed at bringing together the fields of Information and Communication Technologies (ICT), Education, Teacher Training, Learning Design and User-Centred Design (UCD). The main goal was to facilitate the inclusion of ICT in education (http://handsonict.eu/).

The team were committed to UCD methodology and a philosophy in which software design follows an iterative and empirical approach by placing the users at the centre of all its phases: user requirements, design and evaluation. In this context, the HANDSON project started with a benchmarking analysis and a user needs analysis via an online survey. These results drove the design of the 3 pilots. In turn, these pilots were evaluated so that each one included improvements based on the results analysis of the previous one.

As a newer approach to instructional design, Learning Design, considers educators as designers and empowers them with design processes and methods to drive the inclusion of ICT in education. Most of these methods come from the discipline of UCD and the process is indeed very similar; therefore aligning the project process and the project teachings. The two main outcomes that will be illustrated in this presentation are the HANDSON ICT MOOC and the HANDSON Toolkit (a face to face, immersive and short version of the online course). These are designed to facilitate the (re)usage of the course (for Moodle and Canvas) and the toolkit (available in Bulgarian, English, Greek and Spanish). All together they represent a set of products aimed at the continuous professional development of educators for the inclusion of ICT in education.

Paper Session 2a (13.45 - 14.55)

2.1a Božena Mannová (13.45 - 14.00)

TITLE: E-INCLUSION IN THE INFORMATION SOCIETY

ABSTRACT:
Information society is a society with a high level of information and communication technologies based on computer technology and the associated digitizing.
The problem of the information society is to ensure access of all citizens to offered possibilities for new developments and technologies. EU at this base has created the concept of e-Inclusion. E-inclusion is an effort to integrate all citizens in the IS, so that

nobody is left behind and everyone could enjoy the benefits of information and communication technologies (ICT).

E-inclusion means focusing on the participation of individuals and communities in all aspects of the information society in order to narrow the gap in the use of ICT in order to overcome the exclusion of individuals and groups in society. Digital inclusion is not just about technology, it's also a social, cultural and economic factors in society. The concept of digital inclusion is about access, in terms of ensuring equal opportunities so that all members of society to benefit from the advantages that technology offers.

In this presentation, you will be notified of the results of two case studies which were conducted at the Department of Computer Science Faculty of Electrical Engineering in 2005 and 2016. A select group of seniors in 2016 was asked for information technology skills and knowledge of their use. The observed data were compared with data collected in the 2005, based on the same questionnaire form.

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2.2a Lenka Zerzanova (14.00 - 14.15)

TITLE: INCLUSION IN THE CZECH SCHOOL

ABSTRACT:
The presentation shows experiences with inclusion of children with special educational needs in basic schools in Czech Republic. It tries to point out the specifics of working with children with special educational needs.

Inclusive education of young mean, that all pupils and students have possibility to attend same schools where children with disabilities and without it participate and learn together in the same classes. Research shows that when a child with disabilities attends classes alongside peers who do not have disabilities, good things happen. But there are not only advantages, and not all children benefit from this type of education. Inclusive education is also about how we develop and design our schools, classrooms, programs and special activities, where all students will learn and participate together.
In Czech schools started the curricular reform, which bring the opportunity to change Czech education in terms of quantity and especially quality into inclusion schools. At the beginning of the implementation of the reform in schools it was evaluated negatively by teachers. After evaluation of the program new aim focus on increasing the quality of education in the sense, that pupils should have abilities rather than knowledge. This criterion became the main objective of the reform.

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2.3a James Saunders (14.15 - 14.30)

TITLE: Connected, but not switched on: An investigation into the digital divide and ICT inequality within a UK secondary school. How do school leaders perceive this and what are the implications?

ABSTRACT:
This paper investigates the inequality of digital skills and ICT uses within schools. Resources, curriculum, CPD, primary school provision and socio-economic background of parents are evaluated. Key questions regarding awareness, causes, skills and tackling the problem have emerged out of a review of existing research.

Previous research (Livingstone and Helsper, 2007; Hargittai and Walejko, 2008; Hargittai and Hinnant, 2008; Correa et al., 2013) indicates traditional social barriers affecting adults have a knock on effect on their children's use and skills, and that the disparity of provision across and within schools does not support the closing of gaps. Motivation has emerged as a central problem with regard to accessing technology and developing skills.

I have developed a theory concerning what creates the digital skills divide for pupils and what needs to be tackled to close inequality in school and generate pupil capital. This is derived from a combination of addressing imbalances in curriculum and resources, generating primary capital, parent capital, and emotional responses (value placed in technology and motivation to use it).

The findings demonstrate the impact parents and primary schools have on developing skills and that there is some correlation between adult theories of inequality and the findings regarding children.

The socioeconomic background of parents plays a part in creating the divide, dictating the level of home usage. Schools still have work to do to close the divide; there needs to be a drive to ensure that the curriculum and teacher development are keeping pace with innovation whilst supporting the acquisition of higher order digital skills.

The conclusion makes five recommendations: (1) develop relationships with primary schools; (2) employ cross-curricular leadership of ICT; (3) create a core non-negotiable programme of CPD; (4) review ICT resources and ensure the use of flexible non-device specific cloud tools; (5) embed ICT into existing parental engagement programmes.

See also: Dissertation, Sept 2015 and Bridge Across the Digital Divide

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2.4a Jean Edwards and Helen Caldwell (14.30 - 14.45)

TITLE: Exploring the use of digital technology in assessment with students in higher education: assignment design and assignment guidance.

ABSTRACT:
This presentation will share the findings of research into how tutors use digital technology to provide additional guidance for students' assignments and how tutors are beginning to design assignments that are inherently based in the use of digital technology. This research was conducted in the School of Education at the University of Northampton, with tutors and students studying a range of education courses including initial teacher training.

Over the last few years tutors have been increasingly supporting written assignment guidance with digital video and audio materials using tools such as Kaltura (a too available through Blackboard NILE), Explain Everything and Touchcast (apps). The first strand of this research seeks views from tutors and students on the use and effectiveness of this guidance and will result in a toolkit of advice and recommendations for tutors to draw upon.

As well as using digital technologies as a tool to support students some tutors are devising assignments whose form is inherently digital in nature, such as blogs and communities, discussion boards and ThingLink artefacts. The use of mobile technologies can allow students to be more creative and more connected to a range of places where they learn and work (outdoor sites, schools and employment, international locations). They can use aspects of the tools to collaborate purposefully by co-creating, commenting upon each other's learning or discussing issues in forums and discussion boards. The second strand of the research investigates three case studies, drawing out key areas to support tutors who seek to redesign their assignments using digital technologies. Recent research by JISC (2014, p2) on enhancing the digital learning experience for students recommended that assignment design should include "…learning and assessment activities through which learners' digital practices can be demonstrated, recognised and progress".

Reference:

JISC (2014) Students' expectations and experiences of the digital environment. [online] Available from: http://digitalstudent.jiscinvolve.org/wp/students-expectations-and-experiences-of-the-digitalenvironment-phase-1-study/ [Accessed: 16/09/15]

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Paper Session 2b (13.45 - 14.55)

2.1b Lawrence Williams and Lloyd Mead (13.45 - 14.00)

TITLE: Literacy from Scratch: An FE perspective, for LLDD students

ABSTRACT:
The classroom Computing project described here is a development, at FE level, of the highly successful cross-curricular coding initiative called "Literacy from Scratch", which currently covers learning outcomes by students at KS1, KS2, and KS3. See the accompanying web site developed by Lawrence Williams for teachers at: www.literacyfromscratch.org.uk

There is also a supporting text book: "Introducing Computing: a guide for teachers" (Routledge 2015, editor L. Williams).

The new FE element of the project extends coding, creativity, and communication skills to students with learning difficulties and disabilities (LLDD students, aged 18 to 24 years), and is being developed at Lambeth College, in south London. The course tutor at the College is Lloyd Mead. His students are preparing a formal end-of-course presentation about themselves, using the MIT visual programming language, Scratch, to show aspects of their learning, and their personal interests. While this is clearly a challenge for the students, interim results are very encouraging indeed. Students are rapidly developing communication skills and creativity, alongside their coding. The final student presentations and their Scratch files will be available from June, and some of these materials will be published, subsequently, on the Literacy from Scratch web site.

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2.2b Miles Berry (14.00 - 14.15)

TITLE: What we've learnt about teaching computing

ABSTRACT:
Although computer science (as part of computing) has been on the national curriculum for less than two years, there is a growing body of lore emerging from the community, or perhaps communities, of practice in this domain.

Some of the approaches to teaching, and the associated pedagogic content knowledge, adopted by computing teachers appear to be backed by research. Such research was perhaps conducted in an earlier age of programming in schools by Papert and his followers, within the far from representative population of undergraduate computer science

education, or draws on more general research into school effectiveness. Other approaches seem to be based more on pragmatic decisions by those at the chalk- (or IWB-) face, disseminated to teachers through online and offline networking.

Miles explores some of the characteristics of these emerging models of practice, reviewing where available the literature that has informed, or at least supports, these. He considers the mechanisms through which teachers develop novel pedagogic approaches, and how such ideas are adopted and adapted by others. He concludes by exploring ways in which student teachers can participate legitimately in these processes.

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2.3b Alison Iredale (14.15 - 14.30) (presented as video)

TITLE: A review and synthesis of the use of social media in Initial Teacher Education

ABSTRACT:
This literature review addresses the use of social media in initial teacher education. It seeks to explore what constitutes effective use of social media in supporting the development of new teachers in all sectors of teacher education, including Primary, Secondary and Lifelong Learning.

We seek to develop and share a deeper understanding of the complex interplay between digital technologies and the participation and collaboration of pre-service teachers in initial teacher education. This review draws upon previous reviews into the use of ICT in formal educational settings and frames the review in relation to two theoretical frameworks, that of Pedagogical Content Knowledge (Shulman 1986) and Technological Pedagogical Content Knowledge (Mishra and Koehler 2006). In addition, it seeks to combine these theoretical frameworks with the relatively recently emergent thinking around the rhizome in teaching and learning (Cormier 2008, and Deleuze and Guattari 1987). The findings of the review and synthesis will provide a significant contribution to the development of effective teacher education and training across the UK curriculum.

The selection of literature for inclusion represents a range of sources, including academic journal articles, research reports, previous literature reviews, policy documents, evaluation reports and emerging research primarily associated with blogs. We review the literature associated with teacher education both located in the United Kingdom and internationally.

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2.4b David Longman & Sarah Younie (14.30 - 14.45)

TITLE: Mobilising learning: a critique personal devices for learning

ABSTRACT:

We are in an age of personal and technical mobility, where mobile devices ... are carried everywhere. We have the opportunity to design learning differently … In order to understand how people learn through a mobile, pervasive and lifelong interaction with technology, we need to understand the implications of learning with mobile technology and build an **appropriate theory of education** for the mobile age. (Sharples, et al., 2009)

This paper provides a scoping overview of some of the key aspects of the dynamic characteristics of mobile technology, which takes into account the educational contexts in which it appears, and some of the issues raised in relation to our key research questions. In particular, we raise the following question: What would an "appropriate theory of education for the mobile age" look like? Followed by the following important inquiries in relation to this fundamental question:

A. Is a 'theory' or model possible/desirable?
B. What sort of theory is it? (Epistemological, sociological, disciplinary, technical).
C. What must a theory of education do?

Pecha Kucha Presentations (12.15 - 12.45)

20 slides, shown for 20 secs each ((6 minutes and 40 seconds)

1. **Elizabeth Hidson:** A pilot study of pedagogical content knowledge in planning Computing lessons
2. **Helen Boulton:** Exploring Game Jams in developing informal learning: a cross-European case study

3. **Jon Audain:** Welcome to The Hungry Games...and may the odds be ever in your flavour! Transforming ICT practice with BEd/MEd first year students through the use of gamification.

Workshops (15.15 - 16.00)

1. Kevin Burden
Mobilising and Transforming Teacher Educator's Pedagogies

2. Dominic Traynor
Filmmaking for curricular attainment