

## RITWIT Conference Abstract Submission

Title of presentation:

USE OF INTERACTIVE WHITEBOARDS IN TEACHING MATHEMATICS IN HUNGARY

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

PIROSKA BIRÓ

University of Debrecen, Faculty of Informatics

Abstract:

The appearance of the interactive whiteboard in the Hungarian primary and secondary schools has got a new impetus in the last two years, due to *The National Development Plan*, whose aim was to install interactive boards in 42,000 classrooms by 2010. The appearance of the new device made teachers face new tasks concerning the use of the interactive whiteboard, and prompted them to form an all new teaching method and curriculum.

There is not only a need for teacher training, but also to reform the curriculum itself. School publishers and companies of subject development are already working in these areas to create new schemes. The diversity of types of interactive whiteboard and the different software programs they are bundled with makes the educator's work fairly difficult.

The use of interactive boards and different informatic devices in many schools is common, runs smoothly and there is more and more digital curriculum available for teaching practices.

In my presentation I will talk about the use of interactive boards in the schools of Debrecen (Hungary's second largest city), their current impact, the educators' opinion concerning the appearance of the new technologies and the children's reactions to an interactive lesson. I will present my research results regarding teaching mathematics with the interactive whiteboard in primary and secondary schools.

## RITWIT Conference Abstract Submission

Title of presentation:

**Developing a user guide to new technologies in science teaching and learning**

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

James de Winter, Faculty of Education  
Mark Winterbottom, Faculty of Education

Abstract:

With the introduction of new technologies to schools and their potential impacts on pedagogy, there is value in attempting to ensure equity of opportunity to experience the affordances of such technologies for trainee teachers during their initial education and training (ITET). In the University of Cambridge ITET Partnership, there are centres of excellence in using new technologies, although these are usually limited to enthusiastic and technically competent individual mentors in particular schools.

We used funding from the Partnership Development Schools programme (Training and Development Agency for Schools) to support work on five main technologies: podcasting, mobile learning, digital video, games and consoles, and using a wiki. For each of the main technologies, we enabled a technically competent school mentor and trainee to develop a web-based 'user guide' to how technologies can be used in learning, fostering interaction in the classroom, and their value for trainees during teaching practice in particular. The guide was to be aimed at beginners, for whom adoption of such technology was a 'step too far', and was intended to have both a technical and pedagogical focus.

In this presentation, we provide an introduction to the finished user guide. The guide is written collaboratively by participating teachers and university lecturers, and draws on the views of teachers and pupils, contextualised within the relevant published literature. The guide is made available for free on the Internet.

For each technology, there is an introduction to the technology, an identification of the pedagogical affordances identified in the literature, a practical and functional guide to setting up the technology, initial ideas and activities to exemplify how novice users can exploit such affordances, and routes to further classroom ideas. Integral to the guide are video case studies, which report the views and ideas of participating teachers and pupils, making the guide an authentic, pragmatic and realistic introduction to using new technologies to facilitate interaction in the classroom.

## RITWIT Conference Abstract Submission

**Title of presentation:**

**Social learning in class: Synchronous use of online forums in the classroom.**

**Type of presentation:** Short  Standard  Video

**Content:** Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

**Authors + affiliations:**

Mark Hellen. Goldsmiths College, University of London

**Abstract:**

The ubiquitous nature of computer technology means that many teachers are now teaching in environments where their entire class has access to computers for the whole lesson. This paper investigates whether using forums synchronously in class has the potential to engage learners in discussions which they might otherwise get little out of or participate in only peripherally. Empirical evidence is examined to consider whether this technique and use of in-class interactive technology is likely to improve students' understanding and participation in class. This research examines the process by which online technology might be employed to realise situated learning of the kind proposed by Lave and Wenger (1998). Here the technology is used to draw in learners who do not appear to be engaging with the subject matter at a deep enough level as they participate in class discussions. The use of forums as an in-class synchronous element of teaching in higher education where the subject matter involves the students in dealing with complex or controversial issues is designed to engage all students in the group and encourage them to contribute and as such take a more active part in understanding issues where there are no simple or straightforward answers. Issues relating to the potential to use this in the secondary or primary school context will be examined.

## RITWIT Conference Abstract Submission

Title of presentation:

**Exploring the relationship between teachers' practices and beliefs about ICT in Cyprus primary schools**

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

Maria Mama (mm705@cam.ac.uk), Faculty of Education, University of Cambridge

Abstract:

The impact of ICT on education has been disappointingly low despite the great expectations initially underlying the governmental initiatives for the integration of ICT in education. Without underestimating the importance of technical and contextual factors, what is considered crucial for a successful implementation of the ICT initiatives is the understanding of teachers' response to these initiatives as reflected in their beliefs and practices. Following a qualitative approach, my research aims to address a significant gap in the literature, that is the identification of a relationship between these two aspects (beliefs and practices), intending to highlight the conditions that would enable a substantial and sustainable educational change in terms of educational technology.

Eleven primary teachers serving in a school with model technological infrastructure participated in a case study conducted in Cyprus during autumn 2008. The uniqueness of this school (as opposed to the rest of the mainstream schools in Cyprus) was that it was equipped with three microcomputers (instead of one) connected to the Internet and an interactive whiteboard (instead of the conventional board) in each classroom.

A questionnaire-based survey was first conducted to sketch each participant's profile. Pre-lesson semi-structured interviews subsequently provided in-depth data on teachers' teaching philosophy, beliefs about the pedagogical value of ICT, practice with ICT and the perceived obstacles to integration. Evidence on teachers' actual practice was then collected through semi-structured classroom observations enabling its correspondence to the self-reported uses and beliefs. Finally, post-lesson semi-structured interviews were undertaken with the dual purpose of providing further insights into the observational data and serving as a validation tool.

A framework for the qualitative data analysis was developed combining elements from two main theoretical groundings. The first refers to the Technological Pedagogical Content Knowledge (TPACK) recently proposed in literature by Mishra and Koehler (2006). The participants' beliefs will be classified according to the main components of TPACK while their reflection on reported and observed practices will determine a relationship between those practices. However, TPACK is not concerned with the contextual/managerial issues also likely to impact upon classroom practice. Therefore elements from the theories of educational change referring to external complexities (Ely, 1999, Fullan, 2001) have been also built into the framework in order to identify such issues that might have affected the integration of ICT.

Analysis and interpretation of the data are still in progress. Nonetheless, the sample teachers' underdeveloped TPACK, their surprisingly great difficulty in articulating the reasons for which they choose to use a particular tool, their low integration of ICT in their teaching and lack of interactive use – in contrast to the frequent and advanced self-reported uses, and the inadequate ministerial support to the teachers in order for them to exploit the available technology – are some of the findings emerging. The presentation will reflect on this apparent mismatch and the underlying obstacles to integration of new technological tools into classroom practice, focusing here particularly on use of interactive whiteboards and computers as whole class teaching tools.

## RITWIT Conference Abstract Submission

**Title of presentation:**

Research on using interactive boards in Romania

**Type of presentation:** Short  Standard  Video

**Content:** Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

**Authors + affiliations:**

Iuliana Marchis, Babes-Bolyai Univeristy, Cluj-Napoca, Romania

Liliana Ciascai, Babes-Bolyai Univeristy, Cluj-Napoca, Romania

**Abstract:**

Amongst other things, it is claimed that interactive white boards (IWB) encourage an interactive approach (Ball, 2003); make it easier to use multimedia in the classroom (Levy, 2002); and reduce the need to write on the board (Ball, 2003; Miller 2003). The high production values of the resources are attractive to both teachers and children (Smith, 1999; Ball, 2003; Kennewell, 2004). Based on the research of Graham (2003) and Ball (2003), IWBs are able to support a range of different learning styles, so they should be helpful for pupils' learning.

In Romania, interactive whiteboards have recently been introduced in schools, but not yet on a national level. Thus the methodology of using them is unknown for many teachers; most cannot see the benefits of using this technology. There are no teacher training courses yet on using interactive boards, as this equipment is present only in a few schools. In our research we carried out a survey among teachers and pupils about using interactive boards in the classroom. Among many aspects, we asked the teachers how often they use the IWB, how they use it, and if they see any benefits of this technology. An important aspect to study as well is, if teachers have the IWB in school and do not use it, then what is the reason for this? We also asked pupils to say whether this technology is attractive to them and whether it helps their learning. Based on the results of the survey, we intend to formulate interventions to present to policy makers and teacher trainers.

## RITWIT Conference Abstract Submission

Title of presentation:

**Much Ado About iPods: Digital literacy and teaching Shakespeare**

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

Bruce Nightingale, Strand leader PGCE Applied ICT, Nottingham Trent University  
Helen Richards, Head of English, Nottingham Emmanuel School, Nottingham

Abstract:

Narrative is central to all of our experiences, and an important way that experience is made meaningful. Education and entertainment both play a significant part in the evolution of children's narrative, which is evolving within the rapidly developing digital environment. The widespread adoption of Web 2.0 technologies by pupils prompted us to explore ways of leveraging and transferring these capabilities into the classroom. Through the application of techniques developed via the BBC school news project, we sought to empower pupils through making a video related to Shakespeare. The cross-curricular news report project builds on ICT, English and Citizenship at secondary level. It involves pupils simultaneously creating video, audio and text-based news reports, and publishing them on a school website, to which the BBC aims to link.

Teachers were trained to use video and sound recording equipment and software to enable their pupils to deliver the news report. The ease with which the teachers and pupils acquired the skills of videoing and editing encouraged us to extend the range of projects we offered the pupils. By creating and making digital content available for download onto iPods or similar, we are exploring ways to integrate education with tools previously used for entertainment. This project examines the engagement and response of a whole class, but with a focus on pupils whose literacy levels and listening skills are poorly developed.

The pupils worked collaboratively in groups to interpret an act, a scene, or a theme from Macbeth, verbally communicating their ideas and understanding of the play. They produced a 'reduced' script that they then acted out for the class. The drama performance was filmed and subsequently edited by pupils into a 60-second video. Our presentation explores the pedagogical viability of this digitally integrated, multi-sensory approach to the teaching of Shakespeare.

## RITWIT Conference Abstract Submission

Title of presentation:

**Interactive White Board use in Pre-service Primary education in Ireland**

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

Dr. David G. O Grady

Brendan Barry

Mary Immaculate College, University of Limerick, Ireland.

Abstract:

**Theme Two: Developing Practice:** Professional development and initial teacher education:

This paper will discuss the issues surrounding the introduction of IWBs in initial teacher education (primary) in Ireland. (The study will be based on the Promethean Board and Active Primary Software). The research follows a group of 28 student teachers over a 4-week period as they try to master the skills necessary to integrate and infuse the IWB into their teaching. The student teachers will prepare lesson resources for use with the IWB. One lesson will be taught by a student teacher in a real classroom setting, videotaped and peer reviewed by the student group.

An observation instrument based on the FIAC (Flanders Interactive Analysis Categories) will be designed and used by the student teachers when peer reviewing the sample lesson on video. Topics to be addressed will include collaboration, classroom dialogue and student participation. A focus group of participating B.Ed. students will be interviewed with a view to highlighting the positive and negative aspects of using the IWB in teaching and learning. The data will be presented in narrative form based on the themes outlined above. Samples of the lessons produced along with excerpts from the classroom video will be available online for future discussion.

Finally, some recommendations will be offered based on the findings of this short study.

## RITWIT Conference Abstract Submission

**Title of presentation:**

**Using Qwizdom interactive voting systems with primary school children**

**Type of presentation:** Short  Standard  Video

**Content:** Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

**Authors + affiliations:**

Margaret Wallace, BA Hons, DipM, LLM, TQFE, FBILD  
European Pedagogical ICT Licence Programme  
Jack Wills, Cranfield Studios, Cranfield University

**Abstract:**

The paper will analyse teachers' use of Qwizdom Interactive Voting Systems with primary school children and their reporting of their pedagogical integration of the technology in order to attain study modules on the EPICT Licence programme.

The EPICT Licence is an in-house, continuing professional development (CPD) programme enabling effective pedagogical implementation of new technology. The programme methodology includes peer to peer support and sharing of best practice, reflective practice and evaluation of teaching and learning impact within a collegiate approach to practice improvement.

The paper will present practical, case study evidence generated as a result of a Teacher Development Agency-sponsored CPD project for teachers, discuss the impact of varying depths and methods of use and report the teachers' own evidence of their experience and recommendations.

The presentation focuses upon case study primary schools where teachers have successfully used interactive voting technology with their pupils thereafter submitting evidence of use in order to gain EPICT modules.

## RITWIT Conference Abstract Submission

Title of presentation:

**Enhancing subject attainment by using digital multimodal text production and peer presentations in secondary school project work**

Type of presentation: Short  Standard  Video

Content: Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

Authors + affiliations:

Gerd Wikan, Bjørn Faugli, Terje Mølster, Rafael Hope  
Hedmark University College

Abstract:

This paper examines to what extent project-based learning processes, where the learners are using digital artifacts as part of whole class technologies (WCT) for producing multimodal text presentations, have positive effects on subject attainment. The examination is based on analysis of qualitative empirical data, collected from an ongoing action research project in a Norwegian secondary school. The overall project objective is to obtain deeper insight into how the assumed learning-enhancing potential of modern ICT can be utilized and the action part of the project is concerned with integrating ICT use into pupils' learning processes. The researchers work collaboratively with the teachers and pupils to explore ways of enhancing learning through systematic use of ICT. The teachers participate in training programs, qualifying them as mentors of ICT-supported learning processes based on the knowledge production perspective and the use of multimodal text production. The knowledge production perspective (KPP), as a genre, implies that the learners are encouraged to pursue creative approaches to school work and actively apply digital media for constructing presentations. It also implies that they communicate and share their understanding with the other learners. This learning style has been used extensively in Norwegian schools since the 1970s and is characterized as project work or thematic periods and organized as a combination of group work and whole class presentations. One criticism of this learning approach has been that peers are too passive and not very interested during presentations. The project has involved the use of digital presentations in order to find out if this would enhance the learning effect for groups as well as the whole class. Three cases are presented in order to illustrate the level of interaction during peer presentations. Being a work in progress, the investigations allow presentation of only tentative comments at the present stage.

## RITWIT Conference Abstract Submission

**Title of presentation:**

**Combining IWB and video-conferencing equipment to support  
the teaching of English in Taiwan**

**Type of presentation:** Short  Standard  Video

**Content:** Work in progress  Empirical research  Theoretical/Policy  Methodological

Teacher education/development  Other \_\_\_\_\_

**Authors + affiliations:**

Lawrence Williams, Assistant Head Teacher, The Holy Cross School, New Malden, Surrey, and  
MirandaNet (Senior Fellowship in Work-Related Learning)  
Teresa Chang, Taichung First Senior High School, and National Taiwan Normal University

**Abstract:**

This paper outlines a developing international project, currently being undertaken between The Holy Cross School, a secondary girls' school (11 – 18 years) in south London, and the Taichung First National High School (TFNHS), in Taiwan. The aim of this English language project is to explore ways of combining IWB technology with cheaper, web-based video-conferencing equipment, in order to enhance the language-learning experience of secondary school students of English, in Taiwan. The opportunity for sustained listening to a native language speaker by using the video-conferencing equipment, followed by increasingly demanding question-and-answer sessions, together with the interactive visual learning aspects possible with IWB, all combine to strengthen and reinforce language learning. This model, when properly developed, can then be used to support online English Language teaching with many other countries, possibly on a business footing. It has enormous potential. The first phase of the project uses ClickToMeet video-conferencing, and the interactive tools, including IWB, sharing documents, and sharing applications, that it supports. The second phase will explore the use of Promethean IWB, with the use of two classroom cameras (at the front and back of the classroom) which capture the whole experience of student interaction. The evaluation results, from the student and teacher reviews and questionnaires at the end of each phase of the work, will be widely disseminated via the Web so that other teachers can benefit from the experience of online English language teaching developed through this project.