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University of Cambridge

Paper Abstracts

Foivi Antoniou
University of Cambridge

Aesthetic criteria in children's drawings and art appreciation: Rationale of a case study

With this paper I will present and explain the rationale of the research project I am working on as part of my PhD studies. The project will have the form of an embedded multiple-case study looking at the aesthetic criteria children use when they are involved in drawing production and appreciation activities. More specifically, the study will examine the extent to which thirty primary school children are interested in aesthetic qualities when drawing and also when looking at drawings produced by themselves or others. It will also examine the degree of interrelation between their productive and evaluative criteria. The data will be collected through a variety of methods, including group and individual observations, a series of interviews, and collection of children's drawings. This will be both an exploratory and explanatory study since it aims not just to describe the children's artistic behaviours, but also to acquire an insight to the underlying factors that determine these behaviours. The findings will bridge a gap in literature because the previous studies examined separately either children's drawing criteria or their artwork evaluative criteria, but not the interrelation between the two. The presentation will consist of two parts. The first part will comprise a short review of the existing literature on the domain and will explain how the research questions of this study occurred. The second part will be a presentation of the methodological steps that will be applied for the implementation of the study. The choice of the particular methodological design will be justified.

Ayse Kok
University of Oxford

Producing artefacts in the age of digital reproduction: A small-scale case study in HE

The current mindset about learning is dominated by a view of teaching as telling unknowing learners about something they presumably know nothing about which is a misleading conception. Yet, learning is more than being taught. In order to deal with the complexities of the 21st century-learning, creativity skills especially within the context of online collaboration should be conveyed to learners. Creativity plays especially a central role in the process of design. To bring the design mode into the academic curriculum, the "learning by design" approach can be adopted (Fischer, 1994). This type of learning is being achieved through a major design challenge where learners develop designs, build prototypes and use various resources to provide justification for refining their designs. Ideas enter the process as they are relevant to producing an artefact. One of the leading educations institutions where tools supporting design and creativity play a major role is the University of the Arts, London. Sketchbook is one of such digital tools designed for art and design students to support them to showcase their work through portfolios and collaborate on projects through posting images. Sketchbook is an image-sharing site aimed specifically at artists, designers or anyone who works in a visual medium. It allows the users to upload and show one's work, offer descriptions of the process, and have friends and colleagues comment upon each other's ideas. Students are also provided with the opportunity to create their online portfolios and to collaborate on projects through posting images or articles. Besides, creative thinking

tools, exercises and research methods are also presented. This paper describes how students in the University of Arts in London got involved in an online design environment to further develop their creative thinking and design problem-solving skills. After providing a brief literature overview of the field of creativity the paper presents an exemplar of a collaborative visual reflective tool and presents the critical features of such tools to foster social creativity are being explained.

Carla Finesilver
Institute of Education, University of London

Drawing, modeling, colour and motion in students' solutions to a multiplicative 'story' problem

This paper presents and discusses a sample of qualitative, visual data generated from a single student task, taken from a current research project on the representational strategies used by students with difficulties in mathematics. A group of thirteen students have been receiving a series of six tailored numeracy sessions, either individually or in pairs. They were all aged 11-14 years, from two London comprehensive schools, and had been identified by their mathematics teachers as the lowest-attaining in their respective year groups. The overall aim of the sessions was to enhance conceptual and procedural understanding of multiplication and division through the exploration of different representations. During one session, students worked on a 'Cartesian product' problem which required them to consider the combination of the elements of two independent sets; in this case within the scenario of finding the total number of different t-shirt/trousers pairs which could be made by choosing from a 'suitcase' of these clothing items. No task-specific materials were provided, but paper, coloured pens and multilink cubes were available for students to use if they wished. The majority of the students found this task considerably challenging, but were able to tackle it with varying levels of teacher support. No student was able to calculate the answer without some form of external representation. A wide variety of visuo-spatial and/or kinaesthetic representations were produced, including colourful pictorial depictions of the items, physical models both with and without movement into different configurations, and text-based notations. A major part of the research data consists of scans, photographs and descriptions of these. Analysis of results is currently at a preliminary stage, and includes (1) assessment of the level of abstraction found in each of the representations, in terms of enactive, iconic and symbolic content, (2) identification of any changes in representational strategy that took place during the task, and (3) types of support that students required for successful task completion.

Iskra Nunez
Institute of Education, University of London

A critique of existing uses of activity theory in mathematics education

Cultural historical activity theory (CHAT) offers educational researchers a heuristic and analytic framework by which to analyse the complex dynamics that occur in learning contexts such as the mathematics classroom. The unit of analysis in CHAT is a triangular structure of interdependent relationships, called the activity system. The activity system is composed of six components (subject, object, community, instruments, rules, and division of labour). These components are used to describe concepts in mathematics education. The relationships between components are used to illustrate and analyse contradictions at both the micro and macro levels of the educational system. Although each triad of components is a potential separate unit of analysis on its own, the activity system's robustness relies on the holistic approach to analyse the dynamics of human interaction between all components that serve in the transformation of the object of activity over time. A literature review on activity

theory reveals the various uses of the activity system in mathematics education. In some of the reviewed studies, only isolated triads of components are considered, whilst ignoring the rest of the components in the activity system. In particular, this paper claims that a complete operationalisation of the activity system consisting in a conceptual mapping of all components to a learning context is necessary. Although this claim might appear to be a trivial consequence of utilising CHAT, the mathematics educational community has overlooked the complete operationalisation of the unit of analysis. An example that contrasts a complete mapping of the activity system and the mapping of separate components will be given to illustrate how the omission of components results in an oversimplification of the learning dynamics. In this talk, a concise review of the literature on activity theory and its uses in mathematics education is presented, followed by an example illustrating the above claim.

Manzoorul Abedin
University of Cambridge

"A fragile dialogue"? Exploring the relationship between the state and researchers in English education researchers of Bangladesh

One of the main arguments that drive this paper is that ELT (English Language Teaching) policies in Bangladesh are not necessarily preceded by methodologically sound research, and therefore, in many ways, do not fully reflect the complex dynamics that mediate students' English proficiency achievement. Because English is deemed important for trade, commerce, career and education in this globalised world, concerns over English education as a second or foreign language are regularly voiced in this developing nation of South Asia. However, it is generally accepted that the standard of English learning and teaching has fallen steadily despite an abundance of national policy reforms and donor-agency funded projects in the last two decades. Post-independence (since 1971) policy literature reveals that policy and practice undertaken by the government of Bangladesh have been fragmented and inconsistent at different phases of policy-making – fact-finding, formulation, implementation and evaluation. Considering the fact that the education sector is a complexity of projects and activities involving key players like ministries, NGOs and donor agencies, the paper explores the relationship between the local ELT researcher communities and the educational administration/s in order to answer why ELT policy reforms largely failed in Bangladesh to date. To this end, I am keen to investigate whether decision-making in the areas of English education policy is appropriately conditioned by the local factors like socio-economic, cultural, political and other issues. I am interested to know how far the local researchers, who are supposedly aware of these factors, can inform the policy-makers when a policy is formulated and vice versa. Thus, essentially the paper tries to locate the constraints that seem to bar the exchange of information/data between the State and the local researchers. To address these issues, the paper relies on the data derived from a questionnaire survey and semi-structured follow-up interviews carried out on people from both sides of the spectrum – the ELT researcher communities and the State instruments.

Kenzo Sung
U.C. Berkeley

Race and education policy: 1960-70's racial busing policy in Britain and America

Current educational policy typically draws from three analytic frameworks to explain racial disparities in educational outcome: poverty, racial segregation/discrimination, and cultural/linguistic difference. While each rationale led to significant educational reforms during this postwar period, minimal attention is given to either the histories of such policies or how they fared as researchers and policymakers continue to cycle through both the rhetoric and

reforms nearly a half century later. The purpose of this presentation is to comparatively study a slice of the British and American postwar history regarding one of the three frameworks and its most controversial reform resolution, that of racial segregation/discrimination and busing. The 1960-70's policy of busing nonwhite students, whether based on the British dispersal rhetoric or the American desegregation counterpart, was born of increasingly polarized arguments regarding the relationship of race and schooling. Similarly, both busing policies created charged rebuttals that continue to be invoked regularly today. American judicial decisions in the 1960s provided additional tools to enforce the landmark Brown desegregation case, including busing students. While this policy was generally supported by nonwhite communities in the United States, it created widespread backlash from whites throughout the nation with unexpectedly strong responses from cities in the North and West. However, nearly the opposite occurred in the most politicized rebuttal to British Circular 7/65, which pushed for busing of commonwealth immigrant students in LEA's with 'majority immigrant' schools. In this British Southall case, the opposition to Cir 7/65 was the nonwhite immigrant community who charged that the British government's busing policy as racially discriminatory. Through a comparative study of the formation of busing policy within broader postwar reforms, analysis explores on how changes in the global order, or 'imperial trajectories,' can illuminate the complex relations of race, immigration, schooling and nationhood. Particular attention is given to the national discourse surrounding the formation of busing policies and the more publicized responses in each country.

Ayshea Craig
Institute of Education, University of London

Exploring the role of personal theory in education research

It is often suggested that all action, including research practice, is based on the beliefs and theories or 'personal theory' of individuals, although these may be implicit. In the context of education research this claim forms the basis for appeals and requirements for researchers to make their theoretical assumptions and background or framework explicit, both as part of the research process and in reporting their work. In this talk I will take the often expressed yet problematic idea that all research is carried out within a theoretical framework (whether this is made explicit or not) as a starting point, looking at what is meant by 'theory' or 'personal theory' in this context. I will consider whether the use of the term 'theory' in this context implies something more than that implied by, say, 'beliefs' or if it perhaps is used to imply something about those beliefs – for example, their connectedness within a larger structure or system. This discussion of the nature of 'personal theory' will be placed within several wider debates: that about the place of theory in education research; and debates about the role of rationality in human thought and action, and the nature of the mind. My discussion does not assume that there is or could be a right answer to the question of what role theory should or could play in education research. It is more therapeutic in intention: I think that some ground work needs to be done in order to facilitate conversation on the possible role of theory in research, an issue with much shared vocabulary but some very big conceptual divides. Finally, I will introduce my proposed research project which attempts to compare and connect research from different theoretical perspectives in the area of mental arithmetic.

Hazel Wright
Anglia Ruskin University

Using an emergent methodology: Trust in process

This paper describes the process of becoming an educational researcher: how, years of carrying out minor research projects where time constraints necessitated a pre-determined

research strategy led to a determination to let the unfolding research agenda dictate the choice of methods in a doctorate. A former geography graduate, attracted by the wide ranging content in this field, and already experienced in the use of quantitative methods and in textual historical research, I wanted to fully explore the interpretative paradigm in addition to adopting an interdisciplinary approach to my research. I therefore spent some considerable time studying different methodologies and questioning my own ontological and epistemological position before electing for 'real world research' using an emergent framework rather than a postmodern form of bricolage. The reasons behind such decisions form the background to this paper. The research topic was a case study of a group of mature adult women returning to education to train in childcare. Data capture required retrospective recall so, of necessity, the major research strategy was that of interview but the flexibility gained through researching students already known to me, allowed a degree of experimentation with the interview techniques, particularly a shift from semi-structured to conversational style to associative interviewing. This required a means to evidence the nuances within the discourse, met by the adoption of conversational analysis techniques at the transcription stage. Now in the final stages of writing up a doctorate, having coped with total immersion in the data, with exhaustive analysis, with interpretation through writing, and with conceptualization; successful theorization demonstrates that my trust in the process was founded. Thus, it seems timely to share the experience with other students particularly those who have completed similar journeys and any who are mired in the process and wondering why they did not take a straighter pathway, hire an expert guide or at least invest in a clearer guidebook before starting out.

Anna-Marie Higgins
University of Cambridge

Composing 'musique concrète' at secondary school: Lessons learnt from pre-pilot work

'Musique concrète' is composed from transformed, everyday sounds and is not built from conventional musical elements such as a beat or instrumentally-generated pitches. An example of the genre is a work by Hugh le Caine in which a single drop of water is the sole sound source. The composer looped, stretched and compressed the taped sound to produce diverse sonic colours and rhythmic motives, which he then wove musically together to become "Dripsody" (1955). Although musique concrète such as this has been a recognised branch of contemporary Western Art music for over sixty years, it has a narrow fan-base, emanating mainly from third-level music technology departments. As a secondary school teacher, I would like to find out if it could become a creative experience for younger students as well. This is not straightforward. When we follow customary classroom practice, my students and I are unable to engage with it or to judge its worth. Since it is not a widely-researched topic, I have had to undertake much testing of ideas with several groups of 15- and 16-year-olds before being ready to embark on the pilot stage of my research. These pre-pilot explorations were devised to answer some basic questions, including the following: (a) How do young students compose musique concrète when they have few, or no, task constraints? (b) What degree of scaffolding enables students to compose a piece of musique concrète that is not simply a series of sound effects? (c) What influence does formal musical training have on the process and product of this music? (d) How can the imitation of established pieces of musique concrète lead to creative composing? My paper focuses on the methods used to gather this information. I will report on different learning environments, the challenge of engaging with abstract pieces, the use of video in my research and most of all, the difficulty of assessing this music. Findings from these preliminary investigations have helped me to plan the pilot stage of my ethnographic study.

Yu-Sien Lin
University of Exeter

How should a creative pedagogy be like? The Taiwanese children's perspectives regarding the creative pedagogy in drama

In the early twenty-first century, creativity celebrates its global-wide revival among governments which aim to exploit young people's creativity as social capital. Taiwan has also been aware of this development and encouraged research on creativity and the implementation of creative education. Creativity was included for the first time in the curriculum, a reformed one in 2000, as a learning objective. However, in addition to embracing creativity as a learning objective, there is no further definition of creativity or clear guideline for fostering children's creativity in everyday practice. Moreover, there is little research on the concept of creativity and the possible tension of adopting strategies that foster children's creativity under the context of Taiwan, a Chinese heritage society. Creativity may ring a different tone, image, or different perceptions in people's mind in the educational context in Taiwan. In order to gain an in-depth understanding of the Taiwanese teachers and children's views of creativity and their responses to creative pedagogy and the ethos behind it, a series of drama lessons involving the elements and pedagogical strategies of creative pedagogy were designed. Descriptive case study was employed to study the two cases, two six-grade classes in two primary schools in/near Taipei area. In total, 67 children of 11-12 years old and two classroom teachers (as observers) were involved. In this study, three perspectives of accounts are sought to add to the understanding of the experience: the children, classroom teachers, and the drama teacher-researcher, through diaries, response sheets, and interviews. This presentation is based on a part of the findings - the children's responses and evaluations of creative pedagogy. Before the findings, the elements of creative pedagogy, including creative teaching, teaching for creativity, and creative learning, will be looked at, and the close relationship between the approaches of drama and creative pedagogy will also be explained. The children's views will be discussed including their overall responses to the drama lessons, and views toward creativity and creative pedagogy. In their overall responses, their enjoyment and reasons, development through the learning, and difficulties they experienced during the learning are explained; their appraisals of the ways of teaching/learning in the drama lessons, and views to creativity are revealed.

Nada Hammed
University of Glasgow

Integrating information and communication technologies into the early childhood education settings in Saudi Arabia: Challenges and opportunities

Information and Communication Technology (ICT) can offer important learning opportunities in the early years setting but Becta notes that, "...many countries are just at the start of a very long and challenging road ahead." Some of the outcomes of ICT research rely on assertion rather than empirical study while others draw on and recycle a limited number of older studies. A 2008 review by Becta aimed to "gather evidence on the technology potential to support the development of educational policy and practice". In terms of Scotland, a 2002 literature review of ICT in early childhood education suggested that there was a "scarcity of good quality research findings on using ICT in educational settings for pre-school children". Through this researcher's experience as a lecturer in the field of Early Childhood Education in Saudi Arabia she observed and experienced the difficulties of integrating ICT as a teaching aid for teachers and children alike. Much implementation planning comes directly from individual pre-school teachers as there is a lack of a clear strategy on the general use of ICT in the classroom. There is a lack of evidence on the use of ICT in the Saudi ECE to

enable efficient integration into the pre-school environment. This research study aims to develop a suggested guideline (strategy) for the integration and use of ICT in ECE settings. In order to develop such a plan, a collective case study approach is employed to investigate the situation and the actual status of ICT use in pre-school settings. Furthermore, practitioner's perspectives are explored with respect to ICT integration in the early learning environment. The research target community is practitioners in Early Childhood Education settings (both private and state nursery schools), including: Inspectors, Head Teachers, Teachers, Children. The study argues for a more holistic approach of studying ICT in ECE settings. Multiple methods are used as a form of triangulation in order to capture the intricacies in the relationships between the phenomena being observed. ECE practitioners will benefit from participation by gaining more information about the use of ICT. The findings from this study can inform policy makers, ECE administrators and preschool teachers about how the integration of ICT into the early learning environment can be made more efficient in Saudi and internationally.

Dino Sossi
Columbia University and University of Cambridge

"Welcome home to Facebook": Social Networking as a tool for maintaining social capital. A small-scale exploratory qualitative study of the experiences of in-state, out-of-state and international postgraduate students using Facebook

Computer-supported social networks (CSSNs) have been studied less than other computer-related phenomena (Garton, 1998, p 1). To help address this gap, the study's main research question is the role the CSSN site Facebook plays for post-graduate students in terms of maintaining social capital and how this potentially differs between in-state, out-of-state and international students. A questionnaire was administered to, and long-form interviews conducted with, eight post-graduate students living in International House ("I. House"), a residence catering to mature students from around the world. These results were compared with a study of American undergraduate students by Ellison *et al*, (2007). In terms of maintained social capital scale measures, it appears as though there is generally a higher level of maintained social capital for the I. House respondents as compared to Ellison's respondents (2007) study. More specifically, the greater geographic distance of the international students appeared to positively correlate with increased maintained social capital. There appeared to be a generational gap in the use of Facebook by I. House respondents for contacting people back home – parents and grandparents used Facebook rarely or not at all while younger siblings had a higher rate of use. Given the increase in Facebook adoption by younger users, this generational division may continue to grow. It appeared as though there was a functional variation in terms of using Facebook. Facebook was used quite frequently with acquaintances, less important friends, informal relationships and other weak ties. Conversely, Facebook was used much less frequently, or not at all, with family, close friends, more formal relationships and other strong ties, with the notable exception of younger siblings. There was little variation in Facebook use as geographic distance surpassed a certain distance. Respondents believed they would use Facebook more intensively within "tri-state" area boundary of New York, New Jersey and Connecticut and less intensively outside, regardless of whether this was in America or abroad. Facebook use was perceived to be pervasive across graduate students both within and outside the United States. It was also believed that it was an important communication tool for maintaining contact with people back home.

Hongqin Fang
University of Oxford

A comparative study of internal learning and teaching quality assurance between Chinese and British universities

This paper reviews internal learning and teaching quality assurance (ILTQA) systems in Chinese and British universities and compares the similarities and differences of the internal learning and teaching quality assurance systems between them in terms of their organization, contents, methods and functions. This study intends to identify the common problems of ILTQA in both Chinese and British universities; and to imply how Chinese universities may consider to solve these problems and to improve the ILTQA continuously with the experience of British universities as reference.

Yang Yang,
University of Cambridge

Cultural capital, reflexivity and identity: A case study of Chinese rural students in higher education

This article will examine, firstly, what changes in Chinese rural students' cultural capital have been taken place during higher education; secondly, by which mode Chinese rural university students acquire a new cultural capital; thirdly, the roles of reflexivity and identity in rural university students' cultural capital changes; and finally, the role of higher education in rural students' cultural capital change and identity reconstruction. This study espouses methodological pluralism. The questionnaires, which involve 800 urban and rural university students, aim to compare rural and urban university students' tastes, opinions and activities in reading, film, music and art. The questionnaire data show that rural and urban university students share much in cultural taste. However, rural respondents show a lack of information and knowledge on literature and classical music, especially the western forms. Interviews, which involve 40 rural university students, provide an analysis of the role of reflexive identity in the cultural capital changing process. The findings suggest that rural university students are fully aware of their disadvantages in social and cultural aspects. They are highly motivated in overcoming their social and cultural shortages. This research investigates their cultural capital changing process which can be summarised as a personal reflexivity route containing 'self-observation', 'self-identification', 'self-evaluation', 'self-monitoring' and 'self-commitment'. Combining questionnaire data and interview data, this paper argues that Bourdieu's 'practice theory' (1979) is too objectivist and determinist to change. Reflexivity and identity should be influential factors in people's practice of change. Finally, this research discusses higher education's role in rural students' cultural capital change. It states that education should be reformed in order to enable rural students' cultural capital shift.

Cleonice Puggian
University of Cambridge

Methodological and ethical implications of research with 'street youth'

This presentation will explore methodological and ethical implications of research with young people who live on the streets. It draws from an ethnographic study conducted in Rio de Janeiro with 32 young men (12 and 17 years old), who were assisted by three non-governmental organizations (NGO) in the metropolitan area. The research design combined the usual elements of ethnography (participant observation and interviewing), with a youth centred, participatory visual approach that elicited young people's narratives. The rational for

conducting the study was, firstly, the need to examine the phenomena of 'street children' through educational lenses; secondly, the urgency to hear the voices of pupils who were excluded within and out of schools; and, thirdly, to explore if and how educational opportunities could allow marginalized students to overcome social, cultural and economic constraints that often lead others to die on the streets. Methodologically, the investigation highlights at least three issues to be considered by future studies. The first one regards the use of visual methods to release the voices and perspectives of young people, as well as its intricacies with the development of trust and safety in violent urban settings. Secondly, the study has shown that investigations with 'street youth' must account for their constant mobility and ever changing environments. Although frameworks such as Smyth and Hattam's 'three phases in the voiced construction of knowledge' (2002) might be useful as a general guide to 'voice', researchers must be ready to face unexpected, and potentially dangerous alterations in the field, creating strategies to reduce risk. Thirdly, an investigation about youth voices is, for the researcher, a transformative experience on 'dialogical action' (Freire, 1972). Indeed, this type of study is based on 'dialogical encounters', when the researcher must overcome his or her epistemological arrogance to engage with those who have not been heard or who have remained silent. It reveals the central place of young people in research, as well as their role in the process of school improvement and, ultimately, in the transformation of social reality (Rudduck and Flutter, 2004; Rudduck and McIntyre, 2007). These three issues will be explored during the presentation, alongside broader considerations on the contributions of qualitative research for the promotion of educational equality and social justice.

Lee Nordstrum
University of Cambridge

Beyond the methodological dichotomy: A Wittgenstein-inspired dialogue in educational research

Many educational researchers, though not all, subscribe to the idea of a paradigm war between 'the two' (qualitative and quantitative) research methodologies. Some, like Creswell (1994, 2003) recognize that the two methodologies can be combined into 'mixed-methods research' (2003), but their grammar/use of terms still implies a divide. Carr (1995) invokes a classic paradigmatic dichotomy between the 'warring' quantitative and qualitative research traditions. Repeatedly, one hears of 'paradigm wars' (Hammersly, 1992; Schwandt 2000; Yates, 2004). As mentioned above, Creswell (1994, 2003) distinguishes two research paradigms and asserts each possesses unique epistemological and theoretical views. Guba and Lincoln (1994) see a necessary link between one's theoretical perspective and epistemology: 'If a "real" reality is assumed, the posture of the knower must be one of objective detachment or value freedom in order to be able to discover "how things really are" and "how things really work"' (34). It is evident a simplistic dichotomy of 'warring traditions' is rather unsatisfactory, as it glosses over differences and denies the diversity of viewpoints. Moreover, the idea of 'warring methodologies' (Carr, 1995) is founded upon three debatable assumptions: 1) a Crotty-like (1998) flow of epistemology, theoretical perspective, methodology and methods; 2) the dichotomy of research methodologies/paradigms and 3) that abstract, a priori theorizing should influence methodological approach. Most contemporary treatises of Wittgenstein use him to construct a 'critical social theory' complete with ontological pictures of individual and social reality, a task Pleasants (1999: 1) deems 'irreparably oxymoronic'. Contrarily, this paper explores Wittgenstein's critique of philosophy in order to depict how theory, epistemology and methodology can facilitate a productive dialogue-bridge over the methodological divide. Common arguments raised against Wittgenstein are addressed to illustrate that a Wittgenstein-inspired attitude has a great deal to bear on social science research.

Emily Savage-McGlynn
University of Cambridge

The Ravens Progressive Matrices and the WISC-IV: Gender differences, parent education and home learning environment in childhood

Sex differences in cognitive ability have been a greatly debated topic for a number of years and many would now conclude that "there appears to be no sex difference in general intelligence " (p 103, Hines in Ceci and Williams, 2007). However, some specific cognitive abilities do show some sex differences often summarised to indicate that men excel on spatial orientation and math abilities, while women excel at verbal abilities (Hines, 2004). A number of questions are raised concerning the origins and influences involved in the development of such sex differences in cognitive ability. This presentation will discuss such questions within the context of the Ravens Progressive Matrices, considered by many to provide an almost pure measure of general intelligence, and the WISC-IV, one of the most widely used assessments of childhood intelligence. Particular attention will be paid to potential biological and genetic explanations, the quality of the child's home learning environment and the different facets of that environment (children's interaction with parents in an educational capacity, parental education levels, parent educational expectations for their child, parent's beliefs with respect to gender and education, children's preferences for different types of toys and activities, as well as the child's own displayed gender role behaviours). Inherent in my presentation will be a consideration of the possibility of bi-directional patterns of influence that may be occurring in the complex interplay between parents and children such as a discussion surrounding development of gender concept in childhood, parental gender-related beliefs and expectations, and well as innate, biologically based differences (Golombok, 2000; Golombok and Fivush, 1994).

Gwadabe Kurawa
Manchester Metropolitan University

Towards creation of an inclusive classroom

In recent years, much has been written about efforts to include pupils identified as having special educational needs (SEN) in mainstream schools and classrooms. Three main strands, Florian (2009) suggests, can be seen in the inclusion literature. One of these strands, which concerns the paper, is based on a reconceptualisation of the special needs task as part of the process of school improvement (Ainscow, 1999). This idea is based on the argument that it is the structure of schools as organisations rather than differences between individual pupils that create SEN (Skrtic, 1991). In their commitment towards this inclusive direction, many schools in the UK make not only a transformation inside their schools, but also changes in the teaching and learning process in their classrooms. The paper focuses on restructuring of classrooms. The first part of the paper considers the notion of class organisation and the research that has investigated this notion. The second part of the paper considers some of the examples of practice of attending to diversity from a study of the strategies used by a teacher in one English primary school classroom. The evidence provided here proved useful in helping the author on the one hand to understand better ways for responding to pupil diversity in classrooms and, on the other hand would help practitioners to learn more about their own classroom practice and think about possible changes.

Kirk Dorion
University of Cambridge

Science through Drama: A multiple case exploration of the characteristics of drama activities used in secondary science lessons

Over twenty years of research into the use of cross curricular drama in secondary Science has indicated that this medium enables learning of affective, cognitive and procedural knowledge. To date, academic research has tended to frame successful drama pedagogy as resulting from a Drama-in-Education approach, incorporating extended role plays and simulations of social events. By contrast, research has rarely focused on the scope and context of drama which is devised and used by 'real people in real situations' (Cohen *et al* 2000). As such there is a gap in our knowledge between research and classroom practise. This study focussed on teachers' own drama activities in five Science lessons taught across schools in Cambridge, Kent, and Hertfordshire. Their classes spanned the ages of 12 - 16 in the subjects of Chemistry, Biology, and Physics. This study explored the drama forms, teaching objectives, and characteristics by which drama was perceived to enable learning in Science. The findings revealed that drama activities were used to convey a variety of topics that have not yet been recorded in academic literature. These activities were perceived to develop students' visualisation through a range of modalities, which included embodied sensation and anthropomorphic metaphors. Some features reflected the development of Thought Experiment skills. A pedagogic model was produced based on different levels of interactive talk and multimodal communication.

Hasan Akyuzlu
Institute of Education, University of London

Is nature of risk objective or subjective?

The aim of this short oral presentation is to discuss whether risk is subjective or objective or a combination of both. The literature is not clear about the subjectivity and objectivity of the nature of risk. Risk is an important socio-scientific concept in everyday life. In my PhD project, I aim to provide a microworld and explore tools, to help students, consider risk as an objective. Having done so, my microworld will contribute and reduce students' misunderstanding on risk. The distinction between objective and subjective in philosophy normally refers to judgements and claims which people make. Objective judgements and claims are assumed to be free from personal considerations, emotional perspectives, etc. Subjective judgements and claims, however, are assumed to be heavily (if not entirely) influenced by such personal considerations. Thus, the statement 'the height of the London Eye is 135m' is considered to be objective because such precise measurement is presumed to be uninfluenced by personal preferences. Moreover the accuracy of such information can be checked and confirmed by experts. However, the statement 'I like vanilla ice-cream' is an entirely subjective judgment because it can be informed solely by personal preferences. In this sense, objective is culturally agreed, however subjective is individually determined. Campbell (2006) has argued that the need to combine impact and likelihood to assess risk is objective. The detail of this combination depends upon people's preferences. According to Campbell, culturally we could decide that there is distinct dimension of risk which is impact times likelihood. On the other hand, judgements of the size of impact and likelihood are matters of subjective argument. Thus, the core idea of risk analysis literature which is an agreed idea is that impact and likelihood of occurrence have to be coordinated into a single measure of risk in some way which can be objective. On the other hand, there is no agreement about how to do this coordination at the moment. In that sense individuals assessing risk are doing so subjectively. I will explain this debate and details during my presentation.

Chunhong Kim
University of Cambridge

Korean education and PISA: Factors and perceptions

This study examines which factors are the key influences on the outcome of PISA in Korea, and what are the perceptions of educators on the Korea's PISA performance. A series of two focus group discussions and fourteen sets of semi-structured interviews were conducted with school teachers, a PISA administer, and professors in order to discover key elements for Korea's PISA results. It also explores their perceptions on international student achievement including the OECD's PISA study through professional discourses and data analysis. In spite of some negative evidence such as big class size, low compulsory lecture hours, and limited teaching methods, Confucianism and social mobility through education are fostering 'education fever' and enhancing 'testocracy' in Korea. They result in out-of-school learning activities, positive effects of studying with continuity, indirect test coaching. The effect of overall difficulty and curriculum familiarity of the PISA offers insight into the explanation of the Korea's high performance. Moreover, cultural, contextual, structure and functional aspects of education system in Korea turn out to be interplaying with Korea's PISA performance. In light of the research findings, the current study further explores how to interpret Korea's PISA success and how to utilise the interpretations of the test results for Korean education policy and practice. International achievement comparisons are widely perceived as meaningful indicators of providing a comprehensive view of an education system and give teacher confidence. However, this study concludes that education stakeholders should be cautious when interpreting the Korea's high performance in the PISA test, lest it should be directly considered as a success of education. In addition, this study suggests that the cultural and social conditions should be paid more attention to for further exploration. It is noteworthy that socio-cultural factors constitute a significant platform mediating or moderating between the PISA results and Korean education.

Kazuro Shibuya
University of Cambridge

The development of language learning motivation: A study of Japanese university students

This presentation reports on the study on the motivational development of Japanese university students who are learning English as a foreign language. Adopting a qualitatively dominant mixed methods approach, the study aims to explore how L2 (Second Language) motivation of Japanese university students develops from junior high school to university and what influences are involved in the development of their L2 motivation over the course of learning the language. The study focuses on 'motivated' learners who expressed their willingness to learn English at university. Of the 350 participants who took part in the questionnaire, 116 were identified as 'motivated' learners. Analysis of the questionnaire data revealed that 'motivated' learners could be divided into three subgroups based on the time-wise change of their perceived intensity of willingness to learn English (hereafter referred to as intensity of motivation) from junior high school to university. These subgroups consisted of the High-High group whose intensity of motivation was consistently high from junior high school to university, the Low-High group whose intensity of motivation was low at junior high school but increased thereafter, and the High-Low-High group whose intensity of motivation was high at junior high school, but fell at high school, and rose again at university. In the analysis of the interview data, these three groups were examined separately. The interview data was derived from two sets of interviews conducted with each of the 41 'motivated' and 10 'poorly motivated' interviewees whose selection was determined by the results of the questionnaire data. In the presentation, I will report the findings gained mainly from analysis of the interview data with regard to (a) motivational influences which seemed to contribute to enhancing and sustaining L2 motivation of 'motivated' learners and (b)

the developmental process of L2 motivation over the course of learning for individual students of English from *ab initio* study in school to their present stage of study at university.

Beverley Maynard
University of Birmingham and Birmingham City University

Engaging, sustaining and retaining students: How to connect with learners through a holistic model of support

The Labour government's higher education policy has focused on encouraging under-represented groups of students to enter university. Although access to higher education has widened and participation is currently at 44%, nearly a quarter of students fail to complete their studies. Retention rates therefore, remain a cause for concern for the Government whose response since 2002, has been to spend £800m on various initiatives to stem student drop-out rates. However, there is very little evidence of these initiatives significantly improving student retention figures. Why do students disengage and disconnect from higher education? It is evident that students live more complicated, diverse and demanding lives, which is not readily accommodated within universities. For students entering university, there is an expectation that the institution will provide accessible and relevant information about advice, guidance and support, together with a rapid response to any disclosure of need. The expectation within higher education institutions is that students are well prepared, for the rigours of academic life. Research in this area would suggest a mismatch of expectations from both students and institutions. Using a qualitative mixed method approach, including interviews conducted at 18 universities during 2005-08, my research confirms that the mismatch of expectations has led to a critical disconnection between the learner and the learned. This paper focuses on a holistic model of student support through action research that I have developed over the past three years. It is, I believe, one way of addressing the mismatch of expectations by engaging and connecting with our learners.

Dennis Fung Chun-Lok
University of Cambridge

The policies of reintroducing Liberal Studies into Hong Kong secondary schools

This study focused on the policy issues generated by the reintroduction and the predicted effectiveness of the proposed Liberal Studies curriculum in Hong Kong. Theorised by Ball's (1992) 'policy cycle', approximately 200 newspaper articles and 30 government documents were collected to identify the major policy issues in the process of policy-making. The documentary inquiry data show that 'Public Recognition', 'Learning Objectives' and 'Curriculum Structure' are the three major policy issues surrounding the reintroduction. Nevertheless, little evidence of any 'explicit' political influence related to the government of the People's Republic of China was demonstrated. The interviews conducted in the further stage illustrate that teachers predominately recognised the reintroduction as an implementation of policy instead of a change in the students' learning perspectives. It seems that they missed the full import of the reform which could potentially jeopardise the effectiveness of the proposed curriculum. A follow-up questionnaire-based survey successfully uncovers a sharp contrast between the teachers' beliefs and the students' expectations about the proposed curriculum. It is argued that the gap was formed by their remarkable differences in terms of satisfaction with the reintroduction. Moreover, it seems that the teacher training programmes only concentrated on providing the teachers with subject knowledge rather than stressing the reasons behind the reintroduction. It resulted in the teachers' confusion about the teaching objectives of the subject. Therefore, a series of revised training programmes for teachers in Liberal Studies is suggested.

Helen Lees
University of Birmingham

Reactions to the possibility of alternative educational modes

This presentation looks at responses interviewed research participants report having experienced when they meet with the possibilities of alternative educational modes. The study being carried out in this regard forms part of the data collection for a PhD thesis on what happens to the self of parents and others (such as educationists) when discovery of alternatively oriented pedagogic possibilities happens. The discovery is considered in terms of both a sudden 'awakening' and also a gradual 'dawning'. A validating body of research has now been done on the various methods and manners of alternative education and, considered in particular here, home education (Meighan 1995; Rothermel 2002; Neuman and Avriam 2003; Thomas and Pattison 2007). There is subsequently data to support an emerging philosophy of the ways in which the self of alternative educators and educatees is as different from the mainstream as the pedagogical practices utilised. The 'metaphysical' and practical ways in which this is the case, in light of this new research specifically on the discovery of such modes, are considered. An emphasis on the language used by research participants as they describe the moment/s of discovery of the possibility of alternative educational modes for themselves, and the children in their care, is offered with a view to highlighting some interesting parallels between the discovery of such modes and spiritual awakenings of the self. A brief philosophical consideration of why and how this might be the case is made through a late Foucauldian lens of an 'aesthetics of existence' (Foucault 1986).

Demetra Demetriou
University of Cambridge

Interrelationships in children's socio-cognitive development: The case of false-belief understanding

Even though there are numerous articles and book chapters regarding children's Theory of Mind (ToM) development very few of them address the specific issue both longitudinally and comprehensively. The aim of the study reported was to address this gap of socio-cognitive research literature. The study explored the extent to which a number of cognitive (representational thinking, inhibition control, working memory, language) and metacognitive skills (source memory) relate to 4- and 5-year-old children's performance in classic first order false-belief tasks. The directionality of the relationships between the cognitive and metacognitive skills assessed and false-belief understanding over time was addressed by means of a number of longitudinal regressions. A qualitative analysis of children's responses in the justification questions of the false-belief tasks was also conducted to investigate whether this would further inform our understanding of their socio-cognitive development. The present study followed an exploratory repeated-measures design. Fifty-four children were tested on the same set of tasks three times with a six month interval between each test point. Each of the skills under investigation was assessed by two tasks of slightly different difficulty to obtain a more stable account of children's performance. Verbal and non-verbal IQ was assessed at the second test point to be used as a control variable, and the CHILD 3-5 checklist was completed by the children's teachers at the third test point to be used as a more broad measure of children's self-regulation and metacognitive skills. A bidirectional relationship was found between false-belief understanding and language, working memory and source memory as well as a unidirectional relationship running from inhibition control to ToM. Although most of these relationships are to different extents discussed in the ToM research literature, the most intriguing and possibly the strongest of those relationships, namely, the one between false-belief understanding and source memory has been relatively

neglected. It is argued that the specific findings, though preliminary and requiring further confirmation, contribute to the elaboration of the meta-knowing model encompassing both ToM and metacognition.

Lysandra Bradshaw
University of Cambridge

Every child in fMRI matters: Lessons in emotion and engagement from an adolescent classroom

Neuroscience and education both share an interest in the basis of human learning, brain-based research will soon begin to bear upon the design of teaching curricula and pedagogy. Whilst cognitive neuroscience continues its relentless pursuit of unearthing biological explanations for how the brain adapts and learns, teachers stand at this coalface of developing young minds. With such responsibility and burden of expectation it is little wonder that teachers are hungry for new 'scientific' approaches to teaching and in attempt to engage vulnerable individuals in their classroom, they rapidly adopt new methods with little scrutiny or challenge. This enquiry responds to the summons for educators to become critical consumers of neuroscientific research. It places cognitive neuroscience into classroom context. fMRI studies suggest that cognitive function is enhanced by positive emotional experience. Although the methods employed here are far from the fMRI laboratory they seek to interpret such findings from within the classroom. During two weeks of lessons, thirteen early-adolescent students were presented with affective stimuli from their classroom teacher, lesson content and peers. Participants reported their emotional response to stimuli and the subsequent decision-making response was observed. Results support findings from neuroscience that suggests positive emotions enhance executive function. Response to negative emotional stimuli is less supportive of laboratory evidence and demonstrates significant inter-individuality. This study delivers promise for neuroscientists and teachers in the application of science to teaching and learning. The questions raised present challenges for both research disciplines. A model is proposed to support educators in their investigation of neuro-biological hypotheses within their own classroom context. Scientists are challenged to reflect upon how to identify and manipulate the many different instructional variables in the classroom in order to help the complex biological human system learn in its social and cultural context.

Moses Orwe Onyango
University of Cambridge

Exploring teacher preparation to teach about HIV/AIDS

This paper reports case study findings on how a primary teacher training college in Kenya is preparing teacher trainees to teach about HIV/AIDS in primary schools in Kenya. Included are features of Kenya education system. Semi-structure interviews were held with an administrator, 2 teacher trainers, and a group interview with 4 teacher trainees; observation of college environment and document review of syllabus, text books and college calendar was carried out to see evidence of HIV/AIDS activities at the college. Inductive analysis of transcribed data was carried out to obtain codes and themes. Literature was then used to concise the findings. HIV/AIDS is integrated in the college curricula and there are awareness programmes. However teacher trainers have not been all trained to teach about HIV/AIDS and there is limited support and teaching materials. Teacher trainees are HIV/AIDS aware and some have been trained as peer educators and counselors, however, they do not have time to carry out their duties. The college is using the Kenya education sector policy to set up structures for HIV/AIDS programmes. The college's own HIV/AIDS policy is still in a draft stage nine years after the launch of the Kenya education sector policy and this has adversely

affected the mitigation programmes. The College needs to complete her HIV/AIDS policy which will help guide the implementation of HIV/AIDS at the college. A comprehensive HIV/AIDS preventive education is necessary for effective preparation of teacher trainees to teach about HIV/AIDS in schools. HIV/AIDS is preventable through education hence it is crucial to get it right. Recommendations: The HIV/AIDS policy should be systematically implemented; there should be regular monitoring and evaluation for sustainability and to gather data for review because HIV/AIDS issues are dynamic.

Sam Omar
University of Birmingham

Development of CPD leadership in further education

In accounting for the current context of education reform in Further Education (FE), The government expected that all staff employed in the FE sector must from September 2007 be professionally registered and licensed to practise by the Institute for Learning (IfL) and that all teachers should undertake at least 30 hours of continuing Professional Development (CPD). As this change is too important to be left to teachers to deal with on their own, therefore leaders must be developed to face a challenging, demanding and constantly changing environment. The specific focus of this study is on the development of CPD leaders. The research aim of this study is to develop understanding based on in-depth interviews data about resources and wider organisational systems and characteristics which support leadership development for CPD leaders in the college. It hoped that the study will suggest ways of enhancing the professional development of leadership capacity among CPD leaders in particular and of the whole college workforce more generally. The research questions development in the light of insights from the literature review, and also in the light of my personal professional knowledge and experience in the FE sector. The College is implementing a leadership development strategy to nurture leaders at all levels of the college in order to prepare them for the challenges of succession planning, and possible leadership responsibilities in the future. This includes promoting a career progression path for all staff, including support staff. This paper is the result of a pilot study which explored the development of CPD leadership in an FE College. Findings indicate that the role of CPD leaders in the colleges is a complex one that does not lend itself to a prescribed or standardised approach based on an individual's job description.

Hong Bui
University of East Anglia

Comparative research: Team learning among employees in higher education

'Team learning is the process of aligning and developing the capacity of a team to create the results its members truly desire' (Senge, 1990, p 236). This emphasizes the significance of team learning as the fundamental learning units. Despite its importance, team learning among employees in higher education, especially among academics remains poorly understood. This research aims at shedding a light in the area which has recently been urged by the increasingly demanding requirements of interdisciplinary research and teaching in higher education around the world. Through a thorough literature review, a model of team learning has been built with a set of antecedents, two moderators, and the outcome of mental models. Hypotheses were formed, including team commitment, goal setting, development and training, organizational culture, and leadership are positively associated with team learning (antecedents), team learning is positively associated with knowledge sharing (outcome), and better communication systems, and learning environment provide better outcome of team learning (moderators). Thus, the study tested both mediating and

moderating relationships. The data were collected in a form of self-report questionnaires. The model was tested with the data collected from employees of two universities, one in the UK and the other in Vietnam. The findings revealed interesting information on the differences between two universities/two cultures, which is often the benefits of comparative research. The case in VN had more positive results than the case in the UK. There are not many differences between academic and non-academic employees, or between employees who work in science and non-science areas. The research could not avoid some limitations due to self-report questionnaires, though some actions were conducted to reduce research bias. In addition, it is really difficult to measure team performance in higher education, which should have been another outcome of team learning.

Poster Abstracts

Clare Killikelly
University of Cambridge

Poster 1: The development of control over action

Previous research has identified that younger children are more susceptible to distracting stimuli than adults (Ridderinkhof *et al*, 1997). In order to gain insight into how effective learning develops this study will explore the neural processes involved in the development of resistance to interference from distracting stimuli. It has been proposed that interference from distracting stimuli can occur at different levels in the processing and transfer of knowledge in the cognitive system. For example interference can occur at the perceptual level of stimulus representation and the level of response organization (Szucs and Soltesz, 2008). The objective of the current study is to separate the contributions of perceptual and response related processes to interference from distracting stimuli. This study proposes that the perceptual and response related processes can be identified and tracked in real time using psychophysiological measures. To examine the temporal dynamics of resistance to interference three different levels of an analysis will take place. At the behavioural level the reaction time of the participants will be recorded, at the physiological level the muscle contractions of the participants will be recorded using EMG and finally at the cognitive level the neural processes associated with motor control will be examined using LRP. An amended stroop paradigm will be used to induce the effect of interference. The present study will act as a pilot study using adults as it proposes a new methodological framework.

Michael Hast
University of Cambridge

Poster 2: Young children's explicit and tacit understanding of object speed and acceleration

There is consensus among the existing literature that many students display a resistance to conceptual change within science education, notably within the domain of physics. The current research aims to investigate whether at an earlier age alternative knowledge that might facilitate conceptual change can be tapped into. Across four tasks, 160 children aged 4 to 11 years are assessed for understanding of naturally induced object speed and acceleration along a horizontal, down an incline, and in free fall. The first task assessed the children's explicit conceptions of such motion using everyday objects. Their conceptions were further assessed in a similar manner but within a more scientific frame using a tube and balls. Results from both tasks suggest that while the children's understanding does not

comply with accepted scientific views there is conceptual change in explanations over age, indicating low resistance, if any, to change. Following these real object tasks, there will be two computer tasks. The first of these will be a quasi-replication of the tube-and-balls explicit conceptions task. The second computer task, on the other hand, aims to assess the children's tacit understanding of object motion. The overall findings may contribute towards facilitating conceptual change within early science education.

Intan Safinas Mohd Ariff Albakri
University of Cambridge

Poster 3: Experienced teachers' conceptions about teaching and learning in content-based instruction (CBI) contexts

The aim of this study is to explore both Science and EST teachers' conceptions about teaching and learning in CBI contexts and see how their views converge and diverge. This study also aims to identify the changes in both group of teachers' thinking and classroom practice as a result of their experience in their respective CBI contexts. Hence, this study adopts the case-study approach using multiple data collection methods which are semi-structured interview, non-participatory classroom observation and stimulated verbal recall interview. Findings from the study show that EST and Science teachers diverge to some extent in their conceptions about teaching and learning in the CBI contexts. The data from the interview clearly show that both groups of teachers diverge in their pedagogical objectives of teaching their CBI subjects. However, data from the teachers' comments during the interview and their in-class observations do support Woods (1996) proposition that teachers of the same group carry shared behaviour and understandings about teaching and learning that reflect the common shared characteristics of their subculture. In addition, the teachers' comments in the interview show that they experienced little change in their conceptions and classroom practice related to teaching and learning as a result of their CBI experience. This shows that their prior beliefs, assumptions and knowledge about teaching and learning remain as powerful influences to their decision-making and practices in the new CBI context. Interestingly, data from three out of seven teachers who participated in the study can be labeled as 'hotspots' whereby there were inconsistencies between what they claimed during the interview to be their beliefs about teaching and learning and their on-line instructional decision-making.

Nicky Roberts
University of Cambridge

Poster 4: What is mathematics without 1, 2, 3?

Focusing on the learning of mathematics for young children aged (5-7), this presentation explores what happens to young children's conception of mathematics when standard numerals are removed. This presentation draws on the mathematics education work being done on early algebra, and the ways in which children invent external representations of mathematics. In the presentation I motivate for the creation of an imagined world – where mathematics is still in the process of being invented and is not yet standardized. I introduce the character Professor Mouse as one possible narrative context which allows children to move between move between their 'invented' and 'presented' representations of mathematics.

Dino Sossi
Columbia University and University of Cambridge

Poster 5: Kidspiration computer software, tile/stick manipulatives and copying/drawing shapes: An exploratory comparison of three educational interventions in perimeter and area instruction

This study is an exploratory comparison of three different educational interventions with the purpose of improving instruction in the concepts of perimeter and area. Kidspiration computer software, tile/stick manipulatives and copying/drawing shapes were implemented in a student population of Grade 3 learners in a public school in Queens, New York. The interventions were compared using a pre-intervention test of perimeter and area, a formative assessment of levels of group engagement during the intervention, a post-intervention test, a group oral interview as well as a questionnaire regarding student perceptions of the efficacy of these interventions. A comparison of the pre-intervention and post-intervention test scores shows that there was a positive overall effect as a result of the intervention in terms of test scores. As a result, it appears that each of the interventions were useful in helping students learn the concepts of perimeter and area. In terms of student perceptions of the effects of the interventions, they generally exhibited a positive attitude towards mathematics, what they learned in the class and the quality of instruction regardless of intervention. In the longer term, student inherent interest in using computers in learning environments is promising. However, given the lower effectiveness of this intervention, at least compared to pencil/paper in this study, it begs the question about how to best implement this technology to maintain student interest while, at the same time, improve learning. Students were generally enthusiastic about each of the respective interventions regardless of type and at least a minority of students in each group preferred using computers in developing understanding regardless of intervention. This enthusiasm towards interventions points towards the idea of perhaps having classroom teachers using more "intervention-based experimental-like" classroom activities to improve learning. The relative success of the pencil/paper student responses showed the desire of students to have greater input in their own learning by making their own shapes. Given that students involved generally liked this intervention and performed well on the post-intervention test, perhaps the underlying principle of focusing on student-centered learning could be applied to other learning environments regardless of subject matter.

Maria Mama
University of Cambridge

Poster 6: Employing a qualitative approach for an in-depth study of teachers' beliefs and practices with ICT

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 several 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. As opposed to a plethora of studies based exclusively on teachers' reported practices, my research adhered to a qualitative approach looking to collect in-depth data on both reported and observed beliefs and practices. The importance of such approach is highlighted in the attempt to address a gap in the literature, namely the relationship between these two aspects (beliefs and practices). What is eventually aimed is to identify firstly the factors that prevent educational change, and secondly the conditions that would enable such initiative, particularly in Cyprus but also in other contexts which are in similarly primitive phases when educational technology is concerned.

Christodoulos Tasouris
University of Sunderland

Poster 7: Science teachers' beliefs about science and its teaching in Cyprus: How are these beliefs linked to teachers' choices of ICT applications and technological tools?

The present research aims to explore science teachers' beliefs regarding science and its teaching in Cyprus and how these beliefs are linked to teachers' choices and use of ICT tools. Science teachers hold beliefs about science, teaching, learning and these days about the use of ICT. Science teachers' choices and use of ICT is an additional instrument in the attempt to categorise science teachers' beliefs regarding science teaching and learning. An establishment of a link between science teachers' beliefs and their choices and use of ICT will be attempted as well. Thus, the research is likely to shed light on how teachers' beliefs shape their choices and practices of ICT during classroom practice. The research theory of the study is Grounded Theory employing semi-structured interviews and classroom observation as data collection instruments. Primarily, the results are expected to associate science teachers' beliefs about teaching, learning and philosophy of science with their choices and use of ICT tools and resources. Secondly, the results are likely to illuminate a range of issues (teacher training, technological tools, ICT resources and subject syllabuses), which are required to be considered by educational policy makers, curriculum designers and other ministerial educational specialists in Cyprus.

Ana Nikoloska
University of Cambridge
and
Kalina Janevska
London Metropolitan University

Poster 8: Computer anxiety and computer self-efficacy in Macedonian pre-service and in-service teachers

It is known that the computer anxiety, the fear of using computers, could prevent the people from using computer. On the other hand, the frequent use of computer increases the perceived computer self-efficacy, the degree to which one believes that he could successfully complete a task. This leads to a circulus viciosus: on one hand, the fear from using computers leads to avoidance of computers, establishing even more the computer anxiety, and on the other hand the frequent use of computers leads to greater self-efficacy and strengthens the feeling of success, which means the two variables should be negatively correlated. Macedonian pre-service and in-service teachers filled in questionnaires measuring computer anxiety and computer self-efficacy. The goals were to determine whether these two variables would be correlated in a sample comprising of teachers (pre- and in- service) and to determine whether there would be significant differences between the pre-service and in-service teachers regarding the computer anxiety and self-efficacy. Correlation was found between the two variables. Significant difference was not found between pre-service and in-service teachers regarding computer anxiety, but a significant difference was found for computer self-efficacy, suggesting that the pre-service teachers feel more confident than in-service teachers when working on a computer.

Dee Chia
University of Cambridge

Poster 9: An exploratory study on teachers' perceptions of the use of information and communication technology (ICT) in the teaching and learning of pupils identified with mild intellectual disability as well as severe and profound learning difficulties in Singapore

This small-scale qualitative research study focuses on the perspectives of fifteen educators within six special schools (SPED schools) in Singapore about their use of information and communication technology (ICT) in the teaching and learning contexts of children who have been identified with mild intellectual disabilities (MID) as well as severe and profound learning difficulties (SPLD). In the context of this study, the term "ICT" refers to the range of various digital technologies used to access, process, manage and present information, as well as to communicate with others in everyday life in education, leisure, work and the home. Through the implementation of semi-structured interviews, perceptions of the sample of teachers have been analyzed to find that majority of teachers perceive the use of ICT as beneficial but various factors create dilemmas for teachers at the same tine. The study suggests that these dilemmas may be overcome with a shift in SPED school teachers' role-perception, from a traditional view of being "the much needed expert", to one of being a "facilitator of learning experiences and fellow learner" in a class of pupils who have been identified with special educational needs. The study also suggests that teachers perceive a symbiotic relationship between the use of traditional classroom methods and the use of ICT integrated methods in teaching. The benefits or detrimental effects of such a relationship depend on the soundness of teachers' pedagogical experience. Recommendations of the study include an emphasis on the development of a community of practitioners in ICT for peer support in encouraging the use of and improving the quality of ICT integrated methods of teaching to develop pedagogical excellence in Singapore SPED schools. The study also highlighted the need for a greater focus on social and emotional learning as well as values education because pupils are increasingly exposed to the use of ICT in their everyday learning process in Singapore SPED schools.

Abdulssalam Tantani
University of Sunderland

Poster 10: An investigation of the relationship between knowledge and practice in teaching/learning English grammar in Libyan secondary schools

Teaching and learning English grammar in a second language has been chosen to be investigated in this study because there are so many paradoxes surround it. This study aims to explore the correlation between what teachers know about teaching/learning English grammar as well as what they actually do in their classrooms in Libyan secondary schools. Because this research employs quantitative and qualitative approaches, therefore a factual questionnaire, observation and semi-structured interview were used. The whole impetus behind this work is to reassess teaching and learning grammar from a language teachers' point of views to find relationships between teachers' knowledge concerning grammar teaching and their instructional practices.

Tayyaba Tamim
University of Cambridge

Poster 11: Impact of languages in education on capability development: A comparative study of private and government schooling in Pakistan

Language/s as 'symbolic capital' (Bourdieu, 1991) within education can limit or delimit one's capabilities to avail valued opportunities: economic, social, political and cultural. This can lead schooling to reproduce and strengthen the very structures nesting poverty and social inequalities (Bourdieu, 1991; Bowles and Ginitis, 1976 that it sets out to address. It may not be incidental that the poorest populations are also linguistically marginalized (Robinson, 1996). Hence the need to problematize two different configurations of languages used in mainstream education systems in Pakistan: private and government in the context of socioeconomic development. My interdisciplinary research uses human capability development approach (HDCA) to investigate the impact of languages in education experienced during school on the broader context of opportunity and welfare. In this comparative study of private and government schooling, data has been collected through in-depth interviews with final year graduates and their older graduated siblings, participant and non-participant observation and documentary analysis. In my poster presentation I would like to share some emerging themes that highlight the impact of language/s in schooling on capability development of participants graduating from the two different schooling systems.

Lee Nordstrum
University of Cambridge

Poster 12: Through the doors of learning: Education finance policy and demand for schooling in the new South Africa

The No Fee Schools policy was adopted in South Africa in 2006 as pro-poor legislation which disallows the imposition of user fees, previously legal, in designated poor schools. Despite nearly 15 years of post-apartheid attempts at redress, the policy claims a percentage of school-age children do not currently attend educational institutions due to costs associated with direct fees. Government posits that non-attending children will attend school if direct costs are lowered, thus increasing access and participation by the poor. However, several problems exist with this policy. First, it is not clear that educational demand and attendance are significantly linked with fee level in the South African system. Second, even if this is the case, the No Fee School policy has potentially detrimental implications for the quality of poor schools. Third, the policy creates a bimodal funding mechanism for South Africa's schools, based on socio-economic profile. My research addresses these fundamental difficulties by employing an education demand model based on cost, school quality, income and household variables. Next, I evaluate the No Fee School policy based on quantitative indicators regarding attendance levels and school quality in two South African provinces.

Sandra Chaplain
University of Cambridge

Poster 13: Motivation, stress and coping among L2 learners at Key Stage 3

The numbers of pupils opting to study modern foreign languages in the UK at Key Stage 4 (KS4) has declined since 2004 when studying a foreign language became optional rather than a compulsory component of the curriculum. In 2006, concerns about the negative attitudes of secondary aged pupils towards second language (L2) learning, led to significant

changes in curriculum organisation and delivery. However, despite these efforts the motivation to continue has not improved. The present study seeks to examine this concern by investigating the thoughts and feelings of pupils in the first three years of their secondary education - years 7, 8 and 9 (KS3) - that is, prior to their selection of GCSE subjects in year 9. Using a two phase (quan-qual) mixed methods design, the relationship between motivational style, personal agency and stresses associated with L2 learning among a sample of KS3 pupils (n = 200) attending 2 secondary schools in the East of England. Data were collected using a self-report questionnaire from which a purposive sample were selected for interview. The interview sample were selected to represent contrasting motivational orientations, levels of stress and coping styles.

Seham Sassi Abdul Rahman
University of Sunderland

Poster 14: An investigation into the English academic writing strategies employed by students of HE in the NE of England with particular reference to their nationalities and gender

The aim of the research is to compare native and non-native learners' academic writing strategies in higher education, where natives are learners who were born and educated in Britain, and non-native participants are nationals of Mainland China and Libya. This comparison is made in order to determine similarities/differences in strategies employed by the three groups (Britons, Libyans, and Chinese) as well as to provide possible explanations for the findings. The study also aims to explore further effect, namely gender. Because the study has a quantitative and qualitative nature, therefore, a quantitative and qualitative research design will be used. This research is placed in both the positivist and the interpretivist camps, utilising a mixture of quantitative (structured questionnaire) and qualitative (semi-structured interviews) approach. The initial findings show that the difference in usage is statistically significant.