

Teaching and Learning Research Programme



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& LEARNING
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PROGRAMME**

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TLRP Presentations

Thursday
15th September
9.00 - 10.30am

SYMPOSIUM PRESENTATION

Neuroscience and education: the emerging dialogue

Convenor: Claire O'Malley, University of Nottingham

Discussant: Paul Howard-Jones, Graduate School of Education, University of Bristol

Abstract: This symposium focuses upon the new interdisciplinary area of neuroscience in education. Our burgeoning knowledge of the brain is promising new insights into how we learn, and this symposium will highlight some of the latest efforts for a mutually beneficial dialogue between brain science and education. Arguably, the area where neuroscience has already had most impact is in special education, where our understanding of developmental disorders is increasingly informed by physiological measurements and imaging techniques. Here, results are reported from a recent ERP study that provides further evidence for developmental delay in dyslexic children. The perception of dyslexia as based on delay, rather than deviance, has clear implications for remedial reading programmes and such physiological results may even suggest methods suitable for early diagnosis or screening. Another study, using fMRI, will demonstrate the potential usefulness of imaging in understanding the effectiveness, or otherwise, of teaching and learning strategies. In this type of study, physical correlates of mental activity are used to assess cognitive engagement – are such approaches valid? Can they enhance what we know about learning in the classroom? Ideas about the brain and its relevance to education are already in the educational bloodstream. Some of these have a sound scientific basis while others are misleading or unsubstantiated. In approaching some of the issues and opportunities involved with exciting new interdisciplinary area, this symposium will also discuss some of the misconceptions and neuromyths that already abound. It will also consider also how the possibly conflicting perspectives of educational researchers and scientists may be interrelated, drawing upon the discussions, outcomes and concepts arising from the ongoing ESRC-TLRP seminar series 'Collaborative frameworks in neuroscience and education'.

Paper 1

Neuroimaging and dyslexia: an electrophysiological study

Authors: J. Thomson, Faculty of Education, University of Cambridge; T. Baldeweg, Institute of Child Health, University College London; U. Goswami, Faculty of Education, University of Cambridge

Abstract: In previous studies we have found that sensitivity to auditory cues to speech rhythm (e.g., amplitude envelope onset or AEO detection, duration detection) are highly predictive of concurrent reading performance in dyslexic children and their controls, across languages (Goswami *et al.*, 2002; Richardson *et al.*, 2004; Muneaux *et al.*, 2004). Sensitivity to some rhythmic cues account for up to 25% of the variance in reading, even after controlling for IQ.

Amplitude envelope onsets (AEOs) are important cues for speech rhythm, and are one of the earliest cues to word segmentation. They cause the percept of syllable 'beats'. When the rise time of an AEO of a non-speech sound is short, an abrupt beat is heard, whilst longer rise times yield less abrupt beats. A deficit in AEO processing could thus affect an individual's ability to segment the speech stream and so establish phonological representations.

Here we report findings from an electrophysiological study (using Event-related potentials, 'ERP') in which pre-attentive neural (N1) responses to varying AEOs to non-speech sounds were recorded.

To date eight dyslexic children (mean age 10 years) and nine age-matched controls have participated. The preliminary results show that whilst the amplitude of the neural waveforms for typically-developing children vary as a function of AEO rise time, the dyslexic children's waveforms exhibit no such differentiation and are more typical of younger children.

This finding supports the hypothesis that children with dyslexia have a developmental delay, manifest at a neural level, in their perception of basic speech rhythm cues.

Paper 2 **The neurological basis of intelligence**

Presenter: John Geake, Oxford Brookes University

Abstract: One of the greatest challenges for cognitive neuroscience is to understand how the brain is intelligent. This paper will review recent neuroscientific studies of general intelligence, as well as specific forms of reasoning, and feature neuroimaging studies which are concerned with the more creative aspects of intelligent behaviour. These results have implications for educational policy and practice, but first we need to delineate the interpretive strengths and limitations of neuroimaging procedures, and debunk some of the prevailing neuromyths that currently infect education.

Paper 3 **Investigation of a creativity-fostering strategy using fMRI**

Authors: Elspeth Collins and Paul A. Howard-Jones, Graduate School of Education, University of Bristol; Sarah-Jayne Blakemore, Institute of Cognitive Neuroscience, University College London; Ian R. Summers, Biomedical Physics Group, University of Exeter; Guy Claxton, Graduate School of Education, University of Bristol

Abstract: An interdisciplinary investigation was carried out with both educational and cognitive neuroscientific aims. The educational aim was to validate a creativity fostering strategy by demonstrating increased brain activity in appropriate areas. The scientific aim was to investigate previous suggestions that certain right prefrontal areas of the brain play a critical role in creative tasks. It tested the hypothesis that these areas would be involved in approaching a story-generation task creatively (compared with uncreatively) and investigated upon activity in these areas of incorporating words into the story that were unrelated to each other – a strategy considered to encourage semantic divergence.

Preliminary experiments investigated the possible confounding effects of the scanner environment upon creativity, measured the effect of the strategy upon rated creativity of outcomes and acclimatised participants to the unusual experience of being scanned.

In the final part of the investigation, a factorial fMRI design was used to elucidate brain activity involved in creative effort and also the effect upon this activity when participants incorporated words that bore little semantic relationship with each other – shown to increase the rated creativity of stories. Increased activity in the right medial gyrus, associated with the increased creativity of outcomes from unrelated word sets, supports the notion that the strategy operates by encouraging additional semantic divergence and that areas of the right prefrontal cortex are critical to these processes.

The paper reflects upon some of the issues arising from carrying out this kind of study within an educational context.

Paper 4

Towards an integrated model of biological and educational perspectives

Presenter: P.A. Howard-Jones, Graduate School of Education, University of Bristol

Abstract: The basic notion that brain science can be worth considering within an educational context has been challenged by some educators. Such challenges often refer to the dangers of ignoring the wider social environment, and thus could equally be applied to much of cognitive science in general. Yet the interpretivism used to consider social contexts has been called an 'embarrassing partner for the searcher after causal explanation'. Can neuroscientific explanation and situated interpretation become mutually enlightening, even if not reducible to each other?

Current hopes for a two-way influence between education and neuroscience may depend upon a clearer understanding of the interrelationships between biological and socially-orientated educational perspectives. Consideration must be given to how our biological knowledge of the brain and the epistemologies related to its determination interrelate with other perspectives on learning. As a means of initiating discussions, an integrative holistic model is presented that draws upon concepts from social psychology and cognitive science. It suggests how different research methodologies and their associated perspectives may benefit each other. It also highlights a number of different areas where benefits may be most likely to occur, as we become more aware of cognitive and biological processes, and more sophisticated in our observation, reflection and interpretation. Rather than ignore differences between perspectives, the framework differentiates between them in terms of their associated mode of human action. The model may be helpful in supporting the planning and interpretation of mixed methods research, and in the synthesis of findings from different perspectives.

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SYMPOSIUM PRESENTATION

Interactive teaching and interactive technologies

Chair: Steve Kennewell, University of Wales Swansea

Paper 1

Characterising interactivity in the teaching of different subjects using ICT in secondary schools

Authors: Steve Kennewell, Howard Tanner, John Parkinson, Nigel Norman, Sonia Jones and Lynne Meiring, School of Education, University of Wales Swansea

Abstract: National strategies for primary schools in England have suggested that the teaching of literacy and numeracy should be 'interactive', and a number of studies have explored primary teachers' conceptions of what 'interactive teaching' means. The view in the strategies seems to be based on analysis of the features of pedagogy in Pacific Rim countries which were performing better than England in international comparative studies. This view of effective teaching has had an impact on secondary schools, too, through similar national strategies for Key Stage 3 in England, and in both primary and secondary phases in Wales. The differing natures of subjects and the differing cultures of teachers means that interactivity may be interpreted in ways which depend on the subject concerned.

Since ICT is generally characterised as an interactive medium, we would expect it to contribute to interactive teaching. This paper will report and discuss the results of research carried out in preparation for the ESRC Teaching and Learning Research Programme project 'ICT and Interactive Teaching'. Teachers of mathematics, science and modern foreign languages will be asked to describe and exemplify what they think of as interactive teaching, and to identify how, if at all, ICT contributes to the interactivity of their teaching. The results will be analysed using an existing classification scheme that was developed from primary teachers' interpretations of interactive teaching. This scheme will be extended if necessary and used to compare ideas about interactivity in teaching and ICT between different secondary subject, and between primary and secondary teachers.

Paper 2

Interactivity in the primary school: teachers' perceptions in mathematics, science and second language teaching.

Authors: Gary Beauchamp and Cathryn Bicknell, School of Education, University of Wales Swansea

Abstract: Despite widespread government usage in policy documents and initiatives teachers' understanding of, and ability to define, 'interactive teaching' in the primary school is varied. As teachers in England and Wales may be teaching ten or eleven subjects, there is a need to explore whether teachers have a generic understanding of interactivity, or if they use differing pedagogic subject knowledge in different areas of the curriculum. In the context of the initial stages of an ESRC/TLRP-funded project, this study examines primary teachers' perceptions of interactivity in the teaching in the areas of mathematics, science and second language teaching. The study will specifically include, but not be restricted by, an exploration of the effective use of ICT in such methodologies. The findings are based on semi-structured interviews with teachers in the Foundation Stage and across the primary National Curriculum age range (Year 1 to Year 6), including both 'specialist' (through qualification and/or acting as subject co-ordinators) and 'generalist' teachers. The results will identify, where possible, the impact of specialist subject knowledge, but will also seek to establish whether primary teachers' perceptions of 'interactivity' are generic, subject- or age-range-specific in the teaching of mathematics, science and second language teaching.

Paper 3

Interactivity and Play in the Foundation Phase

Presenter: Alex Morgan, Department of Childhood Studies, University of Wales Swansea

Abstract: The new Foundation Phase (3–7 years) is currently being piloted and evaluated in selected settings throughout Wales. It encourages teachers to use planned and purposeful play as a mode of learning and many of its objectives are informal. However, research evidence for the efficacy of play is problematic. Traditionally, implementing a play-based pedagogy has presented numerous difficulties. Furthermore, teachers of young children are being encouraged to implement interactive teaching strategies and to use interactive technologies, yet there is no current agreement as to what is meant by 'interactive' teaching and little evidence regarding the impact of using interactive technologies in environments which are striving to provide interactive or playful learning experiences for young children.

This paper will report on an investigation concerning how a number of schools have interpreted these policies so far. Observations of teaching sessions across a number of different settings with this age group will be analysed in terms of the relationships between play, interactivity and ICT in these settings. The paper will focus on the extent to which play is currently being used with this age group of children as a vehicle to develop ICT capability. It will also explore to what extent interactive technologies are currently proving useful to early years practitioners in developing playful or interactive learning environments. It will consider the balance within these classrooms of child-led and teacher-directed play and also the relationship and balance between learning in play-based and formal learning contexts.

Paper 4

Special educational needs, ICT and interactivity in modern foreign language teaching

Authors: Nigel Norman and Lynne Meiring, School of Education, University of Wales Swansea

Abstract: This paper highlights how the development of the notion of entitlement has demanded that schools and teachers cater for the needs of a wide range of pupils, previously denied an experience of modern languages. In order to enable all pupils to realise

their potential, facilities and strategies have to be reviewed and developed to ensure that their learning experience is appropriate. The paper focuses in particular on the contribution that one such facility, ICT, can make towards removing some of the barriers to learning experienced by some pupils, and enabling them to realise some of the benefits of what has often been perceived as a particularly inaccessible curriculum area.

The paper examines how the generic capability of ICT can enhance and enable the learning of SEN pupils through supporting interactivity in teaching, but does not purport to consider specifically the specialised technology required for certain manifestations of special need.

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Facilitating teacher engagement in more inclusive practice

Presenters: *Sue M.B. Davies, Trinity College, Carmarthen; Andy Howes, University of Manchester*

Abstract: If schools are to become more inclusive, practitioners need to engage with the assumptions that underpin their practice, and often the school culture as a whole. This is easier said than done, particularly in the large and complex organisation of secondary school. An examination of the literature finds that there are many reasons why teachers engage with, or resist, educational change in general and the development of inclusive practice in particular. Whether at the level of the individual teacher, or the departmental or pastoral group, becoming more inclusive requires a critical perspective on current practice and can sometimes appear threatening or irrelevant in the light of other priorities. This paper discusses and evaluates: literature relating to such change, including the particular issues that impact at the secondary phase; the perceptions of teachers about engagement in collaborative action research; the perspectives of teachers about inclusion and making their practice more inclusive.

The ESRC TLRP project 'Facilitating teacher engagement in inclusive practice' is co-funded by ESRC and the Welsh Assembly Government, and provides an opportunity to learn more about these issues in the comparative contexts of Wales and England. The project will explore the factors that influence teacher engagement in structured reflective practice towards more inclusive learning for students. Existing groups of secondary school teachers (in departments, for example, or pastoral groups) in schools in Wales and England will engage in a collaborative action research project in the area of pupil attitude, behaviour and learning. Further developing a systemic rather than individual pupil-focused role in schools, educational psychologists will play a key role in facilitating this process. The affordances and hindrances to teacher engagement will be monitored and an evaluation will be made of the effect of teacher engagement on student learning. Theory of change methodology will be used as a tool both to facilitate implementation of change, and to monitor the effect of the process. The design of the study is iterative, to allow a second phase of teacher projects that will have facilitation that has been enhanced as a consequence of analysis of findings from the first phase. In this paper, data from an initial teacher questionnaire and interviews with key stakeholders will be presented and analysed in the light of the literature.

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The design of learning opportunities for Techno-mathematical Literacies in the workplace

Presenters: *Celia Hoyles, Richard Noss, Arthur Bakker and Phillip Kent, School of Mathematics, Science and Technology, Institute of Education, University of London*

Abstract: In the 'Techno-mathematical Literacies in the Workplace' project (part of the ESRC Teaching and Learning Research Programme) we are investigating the needs of employees in a range of industrial and commercial workplaces to have functional mathematical and statistical knowledge that is grounded in their workplace situations and in the technological artefacts that surround them. We describe the knowledge involved in terms of 'Techno-mathematical Literacies' (TmL) and we are convinced that the idea of literacy is crucial: individuals need to be able to understand and use mathematics as a language which will increasingly pervade the workplace through the mediation of IT-based control and administration systems as much as conventional literacy (reading and writing) has pervaded working life for the last century.

Based on the workplace investigations, we are developing ideas for training in TmL that we call 'learning opportunities': flexible resources for mathematical learning that can be incorporated within, or be presented alongside, workplace technical training materials. We are designing and evaluating prototype learning opportunities using simulations and other software tools, using the methodology of design experiments, which favours an iterative approach of design, evaluation and re-design.

The learning opportunities deal with both the macro- and micro-level of work processes. On the macro-level, we use simulations with contextual images and video to help employees get an understanding of the key stages of the work process and understand the key variables of the process and how they interact. On the micro-level, we use educational statistics software (TinkerPlots) to focus on the statistical ideas that are key to work processes. Our research suggests that a general requirement for industrial workplaces is that employees have to deal with many forms of variation and to identify the stable features of processes; for example, to appreciate the 'common' and 'special' causes that generate variations in manufactured products. Thus, our learning opportunities in this type of context aim at developing a situated understanding of target values, variation and distributions, within the context of production.

In our paper we will present the results of developing prototypes of learning opportunities in two contrasting contexts. First, the statistical aspects involved in industrial production. Second, the work done by 'back office' employees in insurance companies – employees who administrate financial products such as pensions and are required to explain the workings of the products to customers; often this involves the need to consult technical experts, make sense of the experts' explanations and 'translate' them into a form that the customer will understand. A common idea that we will develop across the two contexts is the importance of 'situated modelling', that is, the need for employees to develop models of processes that allow them to make data-informed decisions and communicate with others about the systems and processes that they work with. Where mathematical skills are required in workplaces, the training of de-contextualised mathematical ideas has long been recognised as a problematic approach to effective skills development. We will explain how our 'situated' approach may contribute to more effective training practices.

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2.30 – 4.00pm

The Effective Provision of Pre-School Education (EPPE)

Presenter: Brenda Taggart, Institute of Education, University of London

Abstract: This longitudinal study, funded by the Department for Education and Skills (DfES), assessed the attainment and development of 3,000 children aged 3 to 7 years who attended different types of pre-school. Both quantitative and qualitative methods (including multilevel modelling) were used to explore the effects of pre-school education on children's cognitive attainment and social/behavioural development at entry to school and any continuing effects on such outcomes two years later at the end of Key Stage 1 (age 7). The project explored a wide range of background data at child, family and home level, as well information about the pre-school settings children attended.

The project has provided persuasive data on the benefits of good quality pre-schooling for children's cognitive and social/behavioural development between the ages of 3 and 5 years old and has affected policy at national level. As the first phase of this longitudinal study comes to a close the EPPE team are now able to report the remaining findings on the continual effect of pre-schooling. This paper will report on the effects of pre-school up to the end of Key Stage 1 (at the age of 7 years) to establish whether the pre-school effects apparent at entry to school remain or are 'washed out' as the effects of primary school become more apparent. The project is being extended to establish what happens to children's learning trajectories during Key Stage 2; the new project is called the Effective Pre-School and Primary Education 3–11 (EPPE 3–11) Project.

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Virtual Learning Environments (VLEs) in Initial Teacher Education – no more value than a quill pen?

Presenter: Linda Clarke, School of Education, University of Ulster

Abstract: 'Whilst ICT can make a massive addition to teaching and learning ... ICT itself is of no more value than a quill pen... the value lies in the way the equipment is used.'

Charles Clarke, Secretary of State for Education and Skills at BETT 2003

VLEs will soon be as commonplace as quill pens once were. In January 2004, 58% of all providers of approved Initial Teacher Training (ITT) in England submitted bids for developing e-learning communities in ITT. Almost all Faculties of Education which submitted bids are already involved in e-learning developments. The *Times Educational Supplement's* virtual Staff Room has over 68,000 registered users, who have posted 2,675 messages in the past 24 hours. From late 2005 the *Learning NI* VLE will be available to some 300,000 members of Northern Ireland's educational community. The purpose of the paper is to examine whether and how VLEs can be used effectively to support learning in initial teacher education.

Tutors on the University of Ulster (UU) Postgraduate Certificate in Education, (PGCE, a one-year ITT course) have been piloting the use of a variety of VLEs for over five years. These have been used to serve purposes which are both pragmatic and pedagogical. Pragmatic purposes include the 24/7 worldwide accessibility of a variety of searchable digital resources, implying less photocopying and paper use, and reducing the sense of isolation often felt by students when they are on teaching practice for 24 of the 36 weeks of the course. Pedagogical purposes include fostering ICT skills, providing a venue for reflective writing and building a library of good practice. There is also room for informal, emergent forms of learning.

Students on one UU course, PGCE Geography, are the focus of this case study. Data have been collected using electronic questionnaires, and two end-of-course focus groups (consisting of high and low level users) will soon shed further light on students' experiences of the virtual elements of the course.

Online courses are perhaps more 'real' than those that are face-to-face – a feature supports research in three key ways: the researcher-tutor can draw evidence from the online postings and from the course tracking system and, at the end of the year, students can review their online contributions and engage in meta-reflection to produce personal e-learning profiles.

Preliminary analysis of online content and questionnaires highlights the value of the very popular (non-compulsory) online coffee bar, where there is ample evidence of informal, social learning. Students see the VLE as helping to build an online community of practice with links stretching across space and time. The compulsory reflective discussions provide a venue for both *schadenfreude* and mutual consolation, whilst the emerging library of good practice helps to meet the perennial demand for pedagogical inspiration. Some students find the online tasks time-consuming, others do not like the public nature of the discussion forums, and, if they prefer paper copies, students must do their own printing – with or without recourse to the quill.

Using research to enhance professionalism in further education

Presenter: Mark Goodrham, Calderdale College

Abstract: This presentation will draw on the *Using Research to Enhance Professionalism in Further Education* project. One of the major aims of this research is to investigate the impact of research upon the changing nature of professional practice and identity in Further Education (FE). The research is undertaken in response to continuing and radical changes apparent within the FE sector. The study will investigate the impact of research in transforming professional practice. A prime focus will be the impact of the Teaching and Learning Research Programme (TLRP) 'TLC' project (Transforming Learning Cultures in FE). The research will focus on part-time and full-time staff, in a variety of FE settings. Case study

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groups of FE professionals, some of whom have shown an interest in the TLC research, will comprise the sample. A combination of questionnaires and interviews will be used to investigate staff perceptions of their changing jobs, of the TLC research, and of the links between the two. Data will be collected twice, with an 18-month gap, to help deepen understanding, and assess changes in perceptions of professionalism and of the TLC, over time. The research aims to produce guidelines for the more effective utilisation of research, to aid the further improvement of professional practice in FE.

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SYMPOSIUM PRESENTATION

Early career learning in the professional workplace: theories, methods and insights from longitudinal, cross-professional, comparative study

Chair: Michael Eraut, University of Sussex

Discussant: Carolyn Miller, University of Brighton

Abstract: This presentation will draw on the *Early Career Learning at Work: LINEA* project directed by Professor Michael Eraut, University of Sussex; Professor Frederick Maillardet, University of Brighton; Professor Carolyn Miller, University of Brighton; Stephen Steadman, University of Sussex.

There has hitherto been little direct evidence of what is learned in the early years after graduation, the best way to facilitate this learning, or how university knowledge is adapted to practical situations. This project will investigate three groups of graduates (accountants, engineers and nurses) through their first three years of full-time employment, examining the factors affecting their learning and approaches to improving the management and support of learners.

The accountants will be developing job competence and working for professional qualifications, the engineers will be working towards Chartered Engineer status and the nurses will be engaged mainly in post-qualification learning to develop their expertise.

Research partners include the Institute of Electrical Engineers, the Institute of Chartered Accountants in England and Wales, City University (Barts) and a number of employers of accountants, engineers and nurses.

The outcome for user groups such as employers, professional bodies and government, will be evidence-based recommendations for the management and support of these learner groups, and advice for staff who carry that responsibility. For teachers of professional/vocational education, the outcome will be much better evidence on the transition from higher education to work, how and what HE acquired knowledge is used, and what is learned in the workplace; and a discussion of its implications for the relevant HE programmes. For researchers in teaching and learning, fuller and more theorised accounts of the research will be communicated, together with implications for employers, higher education and other sectors of education.

Paper 1

Methodological challenges in studying workplace learning: strengths and limitations of the adopted approach

Presenter: Stephen Steadman, University of Sussex

Paper 2

Typologies for investigating and reporting what is learned and how

Presenters: Michael Eraut and Stephen Steadman, University of Sussex

Paper 3

An analytical tool for characterising and comparing professional workplace learning environment

Presenters: Frederick Maillardet, University of Brighton; Michael Eraut, University of Sussex

SESSION PRESENTATION

Improving the effectiveness of pupil group work in British primary schools (pupils aged 7–11). A description of the TLRP Phase 2 SPRinG programme and its evaluation in London and Scotland. Three linked papers

Paper 1

Improving the effectiveness of pupil group work in English primary schools. The SPRinG approach described.

Presenters: Peter Blatchford, Ed Baines and Anne Chowne, Institute of Education, University of London

Abstract: There are three main contexts for learning in classrooms. Pupils can interact with the teacher. They can work on their own. Or they can work together as co-learners. This project is based on the view that there is a huge and unrealised potential for this third context. But research shows that there is little group work, little strategic planning for it, pupils rarely receive training in group working, and teachers are often unsure of its benefits and place in the curriculum.

Research indicates that co-operative and collaborative group work can have positive effects on pupil outcomes, but this research is limited in its usefulness for teachers in everyday classrooms. It is often based on small groups, is highly structured, sometimes inconsistent with everyday learning aims, and is typically short-term. Furthermore, these imposed structures do not meet the needs of teachers operating in 'authentic' classroom settings where multiple groups and learning tasks may be undertaken simultaneously.

The SPRinG (Social Pedagogic Research into Grouping) project therefore addressed the wide gap between the potential of group work to influence learning, attitudes to learning, and interactions in the classroom, on the one hand, and the limited use of group work in schools, on the other. The project is distinctive in terms of developing a programme for integrating group work across a school year into everyday classroom activities and the curriculum. It was based at three sites: KS1 (5–7 years) at the University of Brighton, KS2 (7–11 years) at the Institute of Education in London, and KS3 (11–14 years) at the University of Cambridge. There was also a Scottish extension, equivalent to the KS2 study. This presentation will focus on KS2.

The research lasted four years and involved a year-long collaboration between research teams and groups of teachers. In this presentation we describe the research and theoretical basis for the SPRinG project and show its development and underlying principles. This paper acts as the basis for two linked papers in which we describe results from the evaluation phase of KS2, based in London and in Scotland.

SPRinG has three key principles:

1. a developmental relational approach, which seeks to go beyond social skills training to encompass the development of trust and confidence, communication skills and 'advanced' group working skills;
2. a distinctive role for teachers in the design of the programme and in terms of their role in relation to groups;
3. strategies for preparing the classroom context for group work in terms of fixed features such as class and classroom size, and also seating arrangements and preparation of lessons, group work activities and integration into the curriculum.

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We also describe a framework of classroom activities for developing pupils' group work skills, as well as how to bring these skills into the curriculum and the identifiable behaviours and interactions indicative of effective group work.

Paper 2

Improving the effectiveness of pupil group work in English primary schools. Effects of the SPRinG KS2 programme on pupils' science attainment, behaviour and attitudes

Presenters: Ed Baines, Peter Blatchford and Anne Chowne, Institute of Education, University of London

Abstract: The main impetus for the TLRP Phase 2 SPRinG (Social Pedagogic Research into Grouping) project was to address the wide gap between the potential of group work to influence learning, attitudes to learning, and interactions in the classroom, on the one hand, and the limited use of group work in schools, on the other. Research indicates that co-operative and collaborative group work has positive effects on pupil academic, social and attitudinal outcomes but is limited as a research base for group work under normal classroom conditions. Research is needed that evaluates group work operating in 'authentic' classroom settings where multiple groups and learning tasks may be undertaken simultaneously.

This presentation describes results of the evaluation of the KS2 SPRinG project (7–11 years) at the Institute of Education in London. The main aim was to test the effectiveness of SPRinG by comparing pupils trained in group work with those who were not, that is, an intervention and a control group. The research was longitudinal and carried out over a year. The main research question was whether the group-work programme led to increases in:

1. learning/attainment;
2. more 'favourable' motivational patterns and attitudes to learning and group work;
3. behavioural and dialogue patterns supportive of learning.

'Macro' attainment data for science were collected at the start and end of the year, supplemented by focused 'micro' science tests on evaporation and forces before and after lessons involving group work (intervention) or the teacher's usual approach (control) to teach these topics. Motivational/attitudinal measures came from pupil self-completed questionnaires at the start and end of the year which focused on attitudes toward group work, school, peer relations and academic motivation factors. Measures of classroom behaviour came from on-the-spot naturalistic systematic time sample observations, and analysis of videos of groups in SPRinG and control classes. The KS2 study involved 849 pupils in 32 classrooms and 1,027 pupils in 40 classrooms in the experimental and control groups respectively.

Despite teachers' fears that group work might interfere with coverage of the curriculum, we found that SPRinG pupils showed greater progress over the year in the general science test, and sub-sections covering evaporation and forces. They also made more progress during the focused lessons on evaporation. Systematic observations indicated that SPRinG pupils engaged in more group work, engaged in more interactions with other pupils and more of these were on-task and less off-task. Moreover, pupil-pupil interactions tended to be longer and involved more high-level talk. Involvement in SPRinG seemed to stop differences found in the control group between boys and girls and pupils of different attainment levels, and seemed to arrest a decline in attitudes to subject areas found in the control group. Findings will be discussed relative to theories of child development and learning in classroom contexts, in terms of a social pedagogy of classroom learning, and recommendations for practice and policy.

Paper 3

The impact of collaborative group work in primary classrooms within urban and rural schools

Presenters: Andrew Tolmie and Donald Christie, University of Strathclyde; Keith Topping, University of Dundee; Christine Howe, University of Strathclyde; Allen Thurston, University of Dundee; Emma Jessiman, University of Strathclyde; Kay Livingston, University of Strathclyde; Caroline Donaldson, University of Dundee

Abstract: This paper outlines key findings from the ScotSPRinG project, which was funded as a TLRP Scottish Extension linked to the Phase II SPRinG Project. The project involved the participation of pupils and teachers in 28 primary schools in eight local authorities across Scotland.

Experimental work has documented the cognitive gains produced by collaborative work, and has traced these gains to the exchange of ideas that takes place provided activity builds on suitable social and task-related foundations. It has also often been argued that this exchange of ideas has benefits that extend to classroom relations and self-confidence. The aim of the present research was to generate relevant evidence on both points in real classroom settings by evaluating the impact of collaborative group work in science in a sample of Scottish primary schools. Participating classes were selected to cover both composite and single-age classes in urban and rural schools, in order to explore the effects of pre-existing variation in classroom social dynamics.

Approximately 660 upper primary stage pupils (three-quarters intervention, one-quarter controls) were involved in the study. A two-phase intervention designed to foster collaborative group work, using similar approaches to those devised by the SPRinG Project team, was carried out in four categories of class derived from the combination of urban vs rural location and single age vs composite (mixed age) pupils. The first phase of the intervention involved social and communication skills training activities. The second phase focused on collaborative group work in two primary science topic areas: evaporation and forces. A battery of pre- and post-intervention assessments was implemented using a range of cognitive, affective and social measures, including a sociometric instrument designed to tap into the different patterns of social relationships characterising the four categories of class. In addition, systematic classroom observations were conducted during the different phases of the study.

Analysis of cognitive outcomes revealed systematic positive impacts from the intervention across all sections of the sample that were directly attributable to the group work intervention. In particular there were significant gains in attainment in the two specific science topics, which regression analysis showed to be related to indices of the quality of task management and collaborative dialogue during group work. No overall differences were found between composite and single-age classes or urban and rural schools, but there was sufficient variation in the incidence of productive collaborative work to track whether this had knock-on effects on within-class relations and individual self-esteem. In general, group work led to significant increases in the number of class members with whom children liked both working and playing, but overall change in levels of self-esteem was not significant. However, individual improvements in this, as well as the gains in classroom relations, were all consistently predicted by children's observed levels of group-work skills, indicating direct socio-emotional benefits of productive collaborative exchange. Evaluative feedback obtained from teachers was highly positive in terms of the impact of the intervention on both pupil learning and their own professional practice.

Friday
16th September
11.00 - 12.30pm

Contexts, boundary zones and boundary objects in lifelong learning

Presenters: *Richard Edwards, University of Stirling; Zoe Fowler, Lancaster University*

Abstract: From a number of sources there has developed increasing interest in learning as a lifelong and lifewide process. This has expanded and diversified the domains in which learning is now a concern for practitioners and the range of people who might be considered to have an educational role. Historically, this learning is not new, but the extent of interest in it from the wider educational research community is relatively recent and seemingly expanding. Workplaces in particular have become a domain of specific interest, as has the role of supervisors and managers in supporting learning. However, other domains such as the home and community have also become of greater interest to researchers. There is also the influence of, for instance, the growth of the consumer market in learning opportunities and the structured, if distributed, opportunities and self-structuring practices provided by the internet and other technologies. The growth of e-learning and borderless education raises significant questions regarding the relationships that can be fostered across cultures with implications regarding the different cultures of teaching and learning in different contexts and the value placed on different forms of learning. If learning is lifelong and lifewide, what then constitutes a learning context and the relationship between learning and context?

This paper will explore questions about the relationships between learning in these different domains and specific sites. Once we look beyond the context of conventional domains for learning in education and training institutions, allowing context to be extended into the dimension of relationships between individual learners and variously defined others mediated through a range of social, organisational and technological factors, then the limitations of much conventional pedagogy come into sharp focus. For this purpose, the paper will draw upon theories of situated learning, activity theory and actor-network theory to suggest different conceptual framings through which to understand the differences represented by lifelong learning. The paper is theoretically driven and conceptual in nature and arises from work undertaken within the UK Teaching and Learning Research Programme.

Friday
16th September
12.45 - 2.15pm

SYMPOSIUM PRESENTATION

The impact of policy on learning and inclusion in the new learning and skills system

Chair: *Ken Spours, Institute of Education, University of London*

Discussant: *Stephen J. Ball, Institute of Education, University of London*

Abstract: Since January 2004, our project, which is part of the ESRC-funded Teaching and Learning Research Programme, has been exploring the impact of the changes to the learning and skills sector (LSS), following the establishment of the Learning and Skills Council (LSC). Key questions which we have been addressing include:

- What changes have taken place in the policy landscape of the LSS since 1997?
- What policies on teaching learning and assessment have been developed, and what has been their impact?
- What differences have the policies made to the organisation of provision and to teaching learning and assessment for students on Level 1 and Level 2 courses in further education colleges, and in community and work-based sites of learning?
- What is happening to those without 5 grade A*-C GCSEs, or unemployed adults with basic skills needs seeking to enter or re-enter the workforce?

These are some of the questions we shall be considering in our papers presented at this symposium.

Our principal concern in our first year of the research has been to understand the perspectives of a broad range of participants in the system. On the one hand, we have conducted around 70 interviews with important players in the new learning and skills

system, including the senior managers in the LSC and local LSCs, policy-makers in the DfES, and representatives of other bodies such as Regional Development Agencies, local learning partnerships, the Adult Learning Inspectorate and the Association of Colleges. On the other hand, we are working with 24 learning sites, twelve in London and twelve in the North East of England, where we meet managers, tutors and learners: by September 2005, we shall have completed 56 of a planned total of 104 visits to these sites over three years. We shall also have completed our second series of annual seminars, one in London and one in the North East, at which we bring together participants from both strands of our work, enabling policy-makers and those who work in the LSS to come together, discuss our emergent findings and tentative conclusions, and perhaps deepen their understanding of other perspectives within the system.

In this mid-point symposium, therefore, we wish to share these emergent findings, in the hope of having them improved by participants at the Conference. Of the five papers, two are concerned primarily with policy-making and implementation and two with the experiences of professionals working as managers or tutors within the LSS. The fifth paper, central to this symposium, puts the learners 'at the heart of what we do' and lets their voices be heard.

While this symposium will be of interest primarily to those researching or working in adult education or further education, the underpinning question, about how far centrally, regionally or even locally defined education policy impacts on professional practice in classrooms or on the experience of learners, may give it relevance to a wider audience working in other sectors of education.

Paper 1

A new learning and skills landscape in England?

Presenters: *Frank Coffield, Richard Steer, Sheila Edward and Ann Hodgson, Institute of Education, University of London*

Abstract: Is the Learning and Skills Council (LSC) creating radical and enduring change, as David Blunkett hoped? Is it part of the renaissance for a new Britain and helping to usher in *The Learning Age*, as the new Labour Government anticipated? The formation of a more unified Learning and Skills Sector (LSS), with the LSC as the central funding and planning body, undoubtedly marked a major development in post-compulsory education in England from 2001. Over the last three years the roles of the LSC have grown and the organisation has already undergone considerable restructuring. The reshaped LSC, working with partner organisations within the LSS, now faces a range of challenges if it is to be seen as an effective and credible organisation with the capacity to improve the performance of the sector and the quality of teaching and learning for all post-14 learners.

This paper explores the question of how the English government steers policy within the LSS and how effective this is in producing a more inclusive and effective system for lifelong learning. It sets the scene for papers which follow, on the perspectives of managers, tutors and learners within the LSS.

Paper 2

Coping with endless change: the impact on teaching staff

Presenters: *Sheila Edward, Frank Coffield and Richard Steer, Institute of Education, University of London; M. Gregson, University of Sunderland*

Abstract: This paper explores the range of reactions to policy changes within the sector from tutors and managers in our 24 learning sites, in colleges, adult community education and workplaces. The analysis takes account of the diversity within the group: managers and practitioners; college-based and community-based staff; new entrants to the profession and those with decades of experience; subject or vocational tutors and those trained primarily to develop literacy and numeracy.

The last three to four years have seen rapid growth in college, community and work-based provision, accompanied by changes in funding arrangements, new targets and increased

accountability requirements. In adult basic skills education, for example, the drive to meet targets and to maximise numbers taking national literacy and numeracy tests has brought in many new staff, while experienced staff find that their jobs have changed considerably. Whereas some staff are enthusiastic about new areas of activity, others have raised concerns about the needs of their traditional client groups. Managers are highly aware of the need to meet targets, but tutors vary, not only in levels of awareness of targets, but also in responses to them and in willingness to allow them to drive their classroom practice. The paper will also consider views of staff on the 'professionalisation' agenda, and the impact on professional practice of the explosion of staff development activity in this area. It raises wider questions about management of change and about the capacity of professionals to embrace, absorb, comply with, resist and, occasionally, subvert imposed change.

Paper 3

The learners' experience: emergent findings from the learning sites

Presenters: Ann Hodgson, Richard Steer, Ken Spours and Sheila Edward, Institute of Education, University of London

Abstract: Many of the learners we meet are also coping with change, but the changes they face are very different from the policy-driven changes which concern their tutors. Our groups of learners are astonishingly diverse: school leavers who disliked school, but are getting used to being treated as adults by their tutors; ESOL learners who do not have the recognised qualifications to enable them to find employment in areas in which they are skilled; unemployed adults trying to build up their literacy and confidence to fill in more job applications; young mothers with no immediate intention of returning to the workplace, but seeking to upgrade their skills to support their children's school work, or just to prove to themselves that they are not as 'stupid' as they were told at school; and workers who have been drawn into life-changing learning opportunities through their employer's ETP or through their Union Learning Reps. This paper first attempts to describe the range of learners we have interviewed in London and the North East, and then draws on the interview data to explore some common themes in their accounts of their expectations, experience of learning and hopes for progression.

Paper 4

The heart of what we do: policies in teaching, learning and assessment in the new learning and skills sector

Presenters: I. Finlay, University of Strathclyde; M. Gregson, University of Sunderland; K. Spours and F. Coffield, Institute of Education, University of London

Abstract: One of the stated aims of government policy is to put teaching, training, and learning at the heart of what is done in the learning and skills system. This paper provides a critical review of policies on teaching, learning and assessment in the learning and skills sector in England over the past five years. It draws upon data collected and analysed in the early stages of an ESRC-funded Teaching and Learning Research Programme project.

The main sources of data are published policy documents at ministerial, national, regional, local and institutional levels. These published sources are complemented by data from around 70 interviews with those responsible for policy formulation and implementation. Policy is defined widely in this paper to include ideological commitments, strategic objectives, and operational instruments and structures. We explore both *structural steering mechanisms* used by government and management at different levels to influence policy and practices and the effects of *super-structural means of steering policy and practice*, such as the exercise of narrative privilege. The main focus at this stage is what policies have been promoted to impact on learning, teaching, and assessment and what policy processes have been brought into play. We have just begun to attempt to evaluate how effective these policy interventions have been.

Paper 5

Learning the 'lingo': the social construction of pedagogy in the teaching and learning of adult literacy and numeracy

Presenters: M. Gregson and L. Nixon, University of Sunderland; F. Coffield and S. Edward, Institute of Education, University of London

Abstract: This paper is based upon research, carried out in the North East of England between September 2004 and July 2005. Our aim was to highlight the ways in which New Labour's 'Skills for Life' (SfL) policy is impacting upon the teaching, learning and assessment of adult literacy and numeracy. This small-scale project contributed to a larger project in the ESRC-funded Teaching and Learning Research Programme (TLRP). Our TLRP project aims to identify the impact of government policy upon teaching, learning and assessment in FE colleges and sites of adult, community and workplace learning in London and the North East of England. Here we draw upon data from the analysis of policy documents together with interviews with Skills for Life practitioners and managers to explore the ways in which SfL policy is influencing practice.

Using the SfL assessment regime as the focal point of the study, we draw attention to how policy imperatives, which call for the 'personalisation' of learning, the use of Individual Learning Plans (ILPs) and the Core Curriculum are operating to promote a particular model of pedagogy. This may be operating to regulate the thinking and identity of learners and teachers.

SYMPOSIUM PRESENTATION

Changing Concepts, Changing Practices: activity theory as a research tool

Chair: Anne Edwards, University of Birmingham

Abstract: Activity theory has its origins in the attempts of Vygotsky and his colleagues to develop a Marxist understanding of mind in action on the world. Vygotsky's legacy has been enhanced in the seventy years since his death to produce a broad array of approaches to mind, culture and action. In this symposium we discuss activity theory as it has been developed by both Leont'ev and more latterly by Engeström and examine its use in two research projects which have professional learning as a major concern. We focus particularly on Engeström's Developmental Work Research (DWR) which is a methodology designed to trigger learning and change within systems. In the papers we examine what DWR has to offer researchers who take an interventionist approach to research and consider where greater conceptual clarity is needed in the theory itself.

Both projects are located within the changes in professional organisation and practices that are to be outcomes of the *Every Child Matters* agenda and the Children Act. These changes are requiring practitioners to learn new ways of interpreting children and young people, new ways of working with them and their carers and new ways of collaborating with other professionals in that work. Our view is that neither 'transmission' nor 'participation' is a useful metaphor for explaining the kind of learning that needs to occur. Activity theory, with its capacity for enabling reflective systemic analysis and thereby learning, is a sound vehicle for examining and supporting changes in thinking, practices and the organisations in which those practices occur.

The Learning in and for Interagency Working project (LIW) is a TLRP-funded study of learning in practice, while the National Evaluation of the Children's Fund (NECF) is an evaluation project examining the processes and structures which lead to good outcomes for children and young people. Both studies are using DWR as a way of revealing and supporting professional learning, but with slightly different emphases on the transformative potential of the methodology. The first paper (Edwards) will use both projects to set the scene, the second (Warmington) will draw on the LIW study to examine how contradictions are surfaced and used to take forward learning in DWR. In the final paper Day will discuss how DWR has been adapted for use in an evaluation which has knowledge sharing with research participants as a central premise.

Friday
16th September
3.30 – 5.00pm

Paper 1

Activity Theory as a research tool in two studies of developing inter-professional practice in work with vulnerable children and young people

Presenter: Anne Edwards, University of Birmingham

Abstract: In this paper I draw on the National Evaluation of the Children's Fund (NECF) and the TLRP study of Learning in and for Interagency Working (LIW). Both projects are located within expectations for new forms of collaborative practices required by Every Child Matters. I illustrate how different versions of activity theory have informed these pieces of work. By identifying differences between the approaches to activity theory of Leont'ev and of Engeström, the paper will set the scene for the more detailed discussions of evidence to be presented in the two papers which follow. In brief, Leont'ev's focus on object oriented action has particularly lent itself to analyses which (a) have strong explanatory power and (b) through processes of theoretical validation can enable the making of causal inferences. Engeström's version of the theory, on the other hand, provides a methodology for systemic change through a concern with collective learning.

Both versions are rooted in Vygotsky's cultural historical method, which allows an analysis of the formation of conceptual and material tools in use: i.e. how wider societal practices are embedded within thinking and practice. However, both NECF and LIW focus on the emergence of new forms of practice and aim at producing strong conceptual resources for practitioners to use when engaging in the new practices demanded by changes in policy. Evidence of new forms of practice will be presented to illustrate how interagency collaboration might be understood and developed and how activity theory has enabled us to access the evidence.

Paper 2

Surfacing contradictions: intervention workshops as change mechanisms in professional learning

Presenters: Paul Warmington, University of Birmingham; Steve Brown, Loughborough University; Harry Daniels, University of Bath; Anne Edwards, Jane Leadbetter and Deirdre Martin, University of Birmingham; David Middleton, Loughborough University; Sarah Parsons, University of Birmingham; Anna Popova, University of Bath

Abstract: The aim of the Learning in and for Interagency Working project (LIW) is to examine and support professional learning in multiagency settings. Its principal focus is on current innovations in UK children's services, wherein policy demands for 'joined up' provision stress the need for new, qualitatively different forms of practice, in which providers operate across traditional service and team boundaries. Consequently, professionals find themselves located in complex, vertiginous activity systems in which the objects of their collective practice are undergoing radical transformation. The LIW study has drawn upon activity theory to inform its intervention research with children's services practitioners in local authorities. Its aim is to promote 'expansive learning': the creation of new knowledge and practices for the emergent activity of multiagency working. The intervention methodology draws upon the Developmental Work Research (DWR) cycle modelled by Engeström's Finnish Learning for Life project. DWR cycles are organised around 'Change Laboratory' workshops, wherein evidence on professional concepts and practices is scrutinised by researchers and practitioners; contradictions are surfaced and new ways of working proposed. This paper examines DWR workshops as an intervention tool, focusing upon their utilisation of 'contradictions' as the key mechanism for change and development. It considers DWR's potential for embedding conceptual tools capable of expanding professionals' thinking and practice by confronting 'everyday' concepts with 'scientific' concepts. It raises questions about the extent to which it is possible to develop intervention techniques in which researcher / user relationships are dialogic and collaborative, and in which practitioners are able to co-construct expansive, transformative learning.

Friday
16th September
3.30 – 5.00pm

Entering the field: researching further education

Presenters: *Martin Jephcote and Jane Salisbury, Cardiff School of Social Sciences, Cardiff University*

Abstract: The purpose of the research is to provide a contemporary account of learning and working in further education and to better understand learning in terms of learners' experiences. To be conducted over a two-year period, the research uses life-history and life-course interviews together with classroom ethnographies and a structured journal to follow the 'learning journeys' of teachers and students in three colleges of further education. This paper reports on and discusses experiences and issues arising from negotiating access to the colleges.

At an early stage each of the three colleges had supported the research proposal but the reality was that there was still much to negotiate and agree at the levels of principal, senior managers, teachers and students. On the one hand, there were matters of detail to do with the particular characteristics of each college in terms of management structures and curriculum configuration. On the other, there was a need to satisfactorily resolve the sensitivities and anxieties of individuals at each level and provide answers and assurances with respect to personal commitment, ways of working and reporting.

Although experiences such as these are not unusual they do help to reveal and aid understanding of the complexities of individual colleges and the further education sector. Even at an early stage of entry into the field our experience has taught us much about the nature of colleges of further education as organisations and the people that work and learn in them.

In this paper, we focus on the stages of identifying potential participants, negotiating access and reaching informed consent with principals, managers and teachers. We outline the sorts of concerns outlined by each group and our responses to them.

Saturday
17th September
1.30 – 3.00pm

SYMPOSIUM PRESENTATION

Reviewing Reviews: a controversial issue?

Convenor: *Andrew Pollard (TLRP)*

Discussant: *Catrin Roberts (Nuffield Foundation)*

Speakers: *Harry Torrance, Institute of Education, Manchester Metropolitan University; Judy Sebba, University of Sussex; Maggie Maclure, Institute of Education, Manchester Metropolitan University; David Gough, Institute of Education, University of London*

This symposium will address an issue which generated enormous discussion at the 2004 BERA Conference – the nature and status of particular forms of 'review' and approaches to 'reviewing'. It builds on two TLRP-sponsored follow-up seminars at which a selected group of researchers and research users, holding a very wide range of views, came together to wrestle with the issues. Participants included the convenor, speakers and discussant listed above and also Diane Elbourne, Becky Francis, Seamus Hegarty, Richard Pring, Catrin Roberts, Gary Thomas and Geoff Whitty.

The group has affirmed the need to recognise diversity in the academic community, diversity in likely audiences for and purposes of research reviews, and the importance of debate in scholarly advance. However, it similarly recognised the value of demonstrating the strengths of the educational research community, of summarising 'what we think we know and understand' and of making appropriate contributions to policy-making and practice.

The group has been exploring the extent to which such dilemmas might be resolved by being very clear about the purpose of different forms of review: 'scholarship', 'blue skies research' or 'applied research' for example. In relation to each form, they plan to consider how 'high quality' might be understood, identified and worked towards. A report of the group's work will be introduced for discussion. Additional, and perhaps illustrative, contributions may be made by other members of the group.

TLRP September 2005

Professor Andrew Pollard leads the overall research effort and engagement with users. He is responsible for the co-ordination of the Core Team. He is also a team member of the TLRP project on Home and School Knowledge Exchange and Transformation. He is based in the Institute of Education, University of London. (a.pollard@ioe.ac.uk)



Professor Mary James is also from the Institute of Education, University of London. She is particularly concerned with Phase 1 Networks and Phase II projects on school education. Combined with her present work as Director of the TLRP project, Learning to Learn, she works exclusively on the Programme. (m.james@ioe.ac.uk)



Dr Alan Brown (Associate Director) supports work in the area of workplace and lifelong learning. See his Review of Vocational Education and Training Research in the UK (with Ewart Keep) (2000, European Commission). He also coordinates TLRP's European liaison activities. Alan is seconded part-time to TLRP from the Institute for Employment Research, University of Warwick. (alan.brown@warwick.ac.uk)



John Siraj-Blatchford (Associate Director) has particular responsibility for coordinating the development of the Programme's ICT infrastructure and for work on ICT in teaching and learning across the Programme. See his website <http://www.educ.cam.ac.uk/staff/jsb.html> John is based at the Faculty of Education, University of Cambridge. (js303@cam.ac.uk)



Professor Miriam David from the University of Keele is a part-time Associate Director and has particular responsibility for the appropriate thematic work on diversity, difference and participation and for project and user liaison in relation to Higher and Adult Education. (eda35@educ.keele.ac.uk)



Professor Stephen Baron from the University of Strathclyde, is the part-time Associate Director for Capacity Building. Steve is also Coordinator of Scotland's Applied Educational Research Scheme so we have considerable potential for synergy across AERS and TLRP. (s.baron@ioe.ac.uk)



Sarah Douglas (Office, Outputs and Communication Manager) coordinates the office team and is responsible for the overall management of TLRP administration and communication infrastructure. She is a qualified project manager with particular experience of the production of educational publications. (sarah.douglas@ioe.ac.uk)



Bernie Ryder (Presentations and Media Manager) provides specialist contributions to the team. In particular, she draws on her professional experience and qualifications in promotion and marketing to support the programme's impact and dissemination work. She is also responsible for bibliographic checking of Dspace depositions. (b.ryder@ioe.ac.uk)



James O'Toole (Events and Engagement Manager) is responsible for the organisation of major TLRP events (and for managing expense claims). He also leads on the maintenance and application of the Programme's database and other IT systems to maximise user engagement. (j.o'toole@ioe.ac.uk)

