Leeds Institute of Medicine and Health

FACULTY OF MEDICINE AND HEALTH



LEEDS INSTITUTE OF MEDICAL EDUCATION (LIME)

TRANSFORMING MEDICAL EDUCATION THROUGH SCHOLARSHIP AND INNOVATION

Annual Report 2013/2014

Section 1 EXCELLENCE THROUGH SCHOLARSHIP

It is a pleasure to provide the forward to this first annual report for the Leeds Institute of Medical Education. Too often, because of ever increasing workloads, we don't have time to take a moment to reflect on our achievements. Yet reflection is a key skill we require our students to develop. I am proud to work in the School of Medicine in Leeds and particularly proud of the achievements by staff in the Leeds Institute of Medical Education in support of the School providing a first class education for our students. In LIME I am privileged to work alongside dedicated talented staff. This report is a testament to their hard work and commitment and a celebration of our successes in 2013/2014.

My thanks for producing this report go to Martin McAreavey and his team. I hope you enjoy reading it.

Trudie E. Roberts Director, Leeds Institute of Medical Education



Winner of ASPIRE Award Recognising International Excellence in Student Assessment

Leeds Institute of Medical Education

excellence through scholarship



Director of LIME becomes President of Association of Medical Education in Europe (AMEE)

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At the Prague Association of Medical Education in Europe (AMEE) meeting in September Professor Trudie Roberts took over as President of the association after spending one year as President-Elect. AMEE runs the largest medical education conference in the world and is a global organization.

Part of the AMEE role involves working closely with the World Federation of Medical Education (WFME) and may also offer the opportunity to interact with the World Health Organisation (WHO) in the area of global medical education.

Section 2 WORKING IN PARTNERSHIP TO DELIVER AN EXCEPTIONAL STUDENT EXPERIENCE

Students are at the heart of what we do. Through our educational scholarship activities we aim to ensure that our students are transformed by their studies to become exceptional medical and medical educational practitioners and leaders who prioritise the needs and welfare of patients.

LIME has led the development and implementation of a new medical curriculum at Leeds mapped against the requirements of the General Medical Council's 'Tomorrows Doctors' guidance. The delivery of the new curriculum, which we consider 'engaging, enquiring and equipping', is delivered in partnership with our many dedicated partners who include students, patients, patient educators, clinical educators, clinicians, our local community groups and academics.

The institute is proud of its success in leading a nationally and internationally recognised medical programme which has been ranked in the top 10 programmes for overall student satisfaction in the UK by the National Student Survey for the last four years. The school achieved an overall satisfaction rate of 95% in 2012/13 placing the school joint 7th out of the 33 UK medical schools.

Leeds School of medicine was ranked 7th out of the 33 UK medical schools for overall student satisfaction in 2012/13

Recognising and Promoting Professionalism in our Medical Students



The professionalism and commitment of our medical students has for the last four years been recognised on an annual basis in a special ceremony held at the beginning of their third year of study. The ceremony is the only one of its kind in the UK. The School of Medicine was fortunate in welcoming Robert Francis QC to deliver the keynote address at the ceremony.

Robert Francis chaired the public inquiry into the Mid Staffordshire NHS care scandal. His work and commitment to safe, excellent care within the NHS resonates with many of the key messages of the Leeds medical curriculum which is centred around safer, patient centred care and the lifelong personal and professional development of practitioners.



Over 250 students took part in the ceremony on 25th October 2013 together with the Vice Chancellor and former Chief Executive of the NHS Sir Alan Langlands, the Dean of Medicine Professor Paul Stewart, NHS and University colleagues, and patient and carer representatives.

School receives international ASPIRE award for excellence in assessment

The School was delighted to receive an ASPIRE award from the Association for Medical Education in Europe (AMEE) for its outstanding performance in Assessment of Students. The school is the first in the UK to be recognised in this category.



This is an endorsement of the hard work and efforts our staff make to ensure our students receive world-class medical education. Here at Leeds, our students can enjoy being part of a community which offers exceptional teaching, facilities, assessment and support, meaning they get the very best training to be tomorrow's doctors.

> Professor Paul Stewart Dean of the School of Medicine, University of Leeds



"For an institution to be regarded as achieving excellence in the area of assessment there should be evidence of an outstanding programme of assessment which can be demonstrated to actively promote learning in order to achieve the curriculum objectives, provide a fair assessment of learner achievement, and ensure patient safety by only allowing competent individuals to progress and graduate. The notion of excellence also embodies active engagement with scholarship and a desire to seek continuous improvement in the area of assessment of competence"

www.aspire-to-excellence.org

Identifying Potential through our Admissions Processes

We changed from traditional interviews to multiple mini interviews (MMIs) three years ago in response to emerging evidence. Our medical students continue to be heavily involved in the admissions process by developing and delivering interview stations.

This year we have introduced the Bio-Medical Admissions Test (BMAT) as part of the application process. We believe BMAT will offer applicants who currently find it difficult to demonstrate their potential an improved chance of selection.



Admissions Outreach

The School of Medicine is committed to recognizing applicants with significant potential, regardless of background, and attracting them to the University. Our widening participation schemes aim to attract a body of potential students that reflects the wider community.

Our medical students take a major role in our widening participation schemes. They act as ambassadors at University Open Days and support outreach events. The student led group 'Widening Access to Medical School' (WAMS) delivers a programme of outreach activity. The group is supported by the School of Medicine and co-ordinated by Nicky Danks.



WAMS provides support and guidance to school pupils who are interested in a career in medicine but who may not otherwise have access to such support. WAMS provides information and help in six strands and collaborates with other outreach programmes at the University such as Access to Leeds.

The 6 strands are:

- 200 e-mentoring places hosted via a safe internet e-platform called Bright Journals
- Presentations including at medicine taster days, personal statement workshops, and interview workshops held at the University
- A newly launched ambassadors' scheme which directly links medical students to local schools and develops long term relationships.
- A primary school initiative which aims to raise the aspirations of younger pupils
- A dedicated email account, wams@leeds.ac.uk, which is used to respond to queries from prospective applicants
- A newly updated website www.wanttobeadoctor.co.uk

Student led LMEA Summer School - 2014

Leeds Medical Education Academy (LMEA) ran its first successful summer school in 2014. The five-day non-residential programme, designed and run by medical students, provided attendees an opportunity to experience life as a medical student. The programme was supported by the medical school, Leeds Teaching Hospitals Trust (LTHT), Educational Engagement and spearheaded by Nicky Danks.



Admissions Research

Work experience: a deterrent to applicants to medicine from widening participation backgrounds?

This research was commissioned by the Medical Schools Council (MSC) and has contributed to the national Selecting for Excellence project. The projects final report will impact on the introduction of a national work experience placement scheme, PRACTISE.

The team has also been working with the local Postgraduate Department in General Practice (GP). GP placements, with supportive pre and post placement workshops, were organised for 24 students from a widening participation background. The evaluation of this project was presented at the Royal College of General Practitioners (RCGP) Annual Conference.

A positive experience, tested lots of aspects of my personality in interesting ways

Engaging patients and carers in the Medical Curriculum: Patient I Carer Community (PCC)

With the growing emphasis on patient-centred care and communication, the General Medical Council's Tomorrow's Doctors (2009) places patient and carer involvement at the core of medical education and a key requirement is that MBChB graduates "make the care of patients their first concern". Involvement activities can help medical students begin to understand and empathise with the needs of patients and carers. It can also help to improve their confidence and interpersonal skills when dealing with issues such as disability, chronic illness and mental health.

We recognise how important it is to ensure that the doctors of the future can communicate effectively with patients, carers and their family members. Patient and carer involvement through our PCC allows our MBChB students to gain first-hand experience of working with individuals who are living with, or caring for someone with, a medical condition or disability.

The PCC is a community of patients and carers working in partnership with students, educators and clinicians, leading the way locally and nationally in educating the medical profession. The PCC makes a difference by putting real stories at the heart of the curriculum so that patients, carers and their family members everywhere will experience the best possible healthcare.

The PCC group has over 180 patients, carers and family members from a range of backgrounds with an age range from 5 to 86 years. They have experience of living with HIV, cancer, diabetes, arthritis and mental health issues. Although we use the term 'patient' we actually mean anyone who has received medical treatment (e.g. for cancer) or who lives with a physical or mental health condition, or disability.

Here are a few examples of how PCC members are involved in the **MBChB programme:**

- Admissions PCC members take part in the Multiple Mini Interviews (MMIs). Interviewees are required to discuss a relevant topic with a patient or carer who will then assess their ability to interact e.g. listen and build a rapport.
- Teaching Members deliver an introductory lecture to Year 1 medical students - 'What Patients and Carers want from Tomorrow's Doctors' (GMC 2009) as well as run classroom sessions about Patient Safety on the IDEALS course.
- Learning Work with 1st and 4th year students to explore what it is like to live day to day with a chronic illness or to care for someone with one. Year 1 students also visit patients and carers in their own homes. This reinforces the impact chronic illness has, not only on patients, but on their carers and families. PCC members co-facilitate Stigma in Mental Health sessions for Year 3 students.
- Assessment PCC members help to write, deliver and assess end of year examinations (Objective Structured Clinical Exams
 - OSCEs) in both years 3 and 5.

- Mentoring Patient/Carer Mentors work with students in small groups to talk through issues encountered on their clinical placements in both years 1 and 2.
- Communication PCC members work as Simulated Patients (SPs) and Facilitators on the Communication Skills Course in Years 2 and 3

Being involved with the PCC has restored my confidence and selfesteem, pushed health worries aside, given me optimism and made me feel a valued member of a great team.

PCC Member

PCC involvement in the MBChB benefits our students by:

- Ensuring that students and staff always consider the patient/ carer perspective
- Improving the relationship between health professionals and patients and carers
- Improving the health and well-being of patients and carers
- Improving the design and delivery of health courses, which will ultimately lead to improvements in the delivery of care by qualified professionals

Although our students are taught about the medical aspects of illness, listening to a patient or carer who actually lives with, or has experienced, a particular medical condition or disability can be enormously powerful. This experience helps medical students to understand things from a patient/carer perspective and to explore how a condition or disability impacts on the life of the patient or carer. As a result our graduates are better equipped to communicate effectively and work in partnership with patients and carers throughout their medical career.

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Learning with and from real patients and carers has such a powerful impact on me. It reminds me why I wanted to come to medical school in the first place.



MBChB student

Working with NHS partners and rewarding excellence in Clinical Teaching

Clinical Teaching Excellence Awards — individual and team - are made to encourage and reward excellent undergraduate clinical teaching across the NHS in West Yorkshire and Harrogate and to support the development of medical, healthcare and dental staff in this area. Successful applicants have demonstrated evidence of promoting and enhancing the student learning experience, supporting colleagues and a commitment to ongoing professional development. Team Awards have demonstrated how the development and integration of their team has enhanced excellent placement teaching.

Development Awards are made to junior staff who are within the first five years of starting their career in medical education and can show that they have already received positive student feedback and are active in clinical teaching. Find out more about our other winners at:

http://medhealth.leeds.ac.uk/info/800/leeds_institute_of_ medical_education/1434/clinical_teaching_excellence_ award_winners_201314

Some of our recent Clinical Teaching Excellence Award winners



Dr Hazel White, Dr Phillip Batin and Ms. Fiona Coia receiving a Clinical Teaching Excellence Award (team) from Professor David Cottrell. The winning team is from a multi-disciplinary team of Spinal Injuries, Cardiology, Cardio-Respiratory, Respiratory Medicine and Orthopaedics at Pinderfields Hospital - Mid Yorkshire Hospitals NHS Trust



Dr Etienne Ciantar - Obstetrics & Gynaecology, Leeds Teaching Hospitals NHS Trust receiving a Clinical Teaching Excellence Award (Individual) from Professor David Cottrell.

Recognising longstanding excellence in teaching

Leeds School of Medicine recognises NHS clinical teachers and other NHS and University staff who are due to retire, or have just retired, and have gained a reputation for their commitment to teaching excellence and for their support of our medical students over many years.

Some of our 2013 award winners



Mrs Hazel Frith and Mr Ian Hutchinson receive their awards from Sir Alan Langlands

LIME producing the next generation of Medical Educators through its intercalated BSc programme in Applied Health Sciences (Medical Education) and PhD programmes

LIME assists in producing the next generation of Medical Education practitioners, researchers and leaders. It achieves this by inviting undergraduate medical students to spend an extra year studying in Leeds to complete a BSc in Applied Health Sciences (Medical Education) and through inviting more seasoned students and professionals to undertake MD / PhD study in Medical Education at Leeds.

The Medical Education strand of the Intercalated B.Sc. Applied Health Suite ran for the first time in 2012-13, with 7 students, including 1 external student being recruited. In 2013-14, this rose to 9 students, including 3 external. For 2014-15, 12 students, including 1 external, have been registered to date.



Graduates of the Intercalated BSc in Applied Health

LIME also has a sizeable cohort of PhD students, currently 6 Full Time students and 5 Part-Time students. These students are at the cutting edge of Medical Education research and will be the Medical Education leaders and Principal Investigators of the future.

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Studying for a PhD in LIME is a unique opportunity. Support is provided formally through supervision, research seminars and in-house workshops tailored to the needs of those studying in medical education, and informally through the network of PhD students who study here.

Viktoria Joynes, PhD Student

New Academic Divisions join LIME. This year we welcomed Anatomy and Women's and Children's Health



Section 3 DELIVERING EXCELLENCE IN EDUCATIONAL RESEARCH AND INNOVATION

Central to all our work is research, scholarship and innovation for which we have gained a national and international reputation. Learning gained from such activity is fed directly back into our work with students and partners.

Learning Layers – Exploring how learning technology can support healthcare professionals' informal learning and improve practice

Professionals in health and social care are involved in learning every day. Learning in practice (which could include reflecting on patient cases, learning from patients themselves, Twitter and other social media exchanges, discussions with colleagues, reviewing new guidelines or research or sharing learning with others) helps to ensure that high quality patient care is maintained and developed.

Learning Layers is a 4 year (November 2012 – October 2016), large-scale research project co-funded by the European Commission's 7th Framework Programme as part of the Technology Enhanced Learning call. LIME is a significant partner (receiving \in 1,006,402 funding over 4 years) in a consortium of 17 institutions representing 8 different countries (http://learninglayers.eu/team/). The projects focus is on understanding learning at the workplace and developing a set of modular and flexible technologies for supporting this workplace learning in networks of Small and Medium Enterprises (SMEs). The research is taking place in two sectors: healthcare in the UK (work led by LIME) and building and construction in Germany.

The work with the healthcare sector is focusing on primary care. LIME is leading the work in collaboration with Yorkshire & Humber Commissioning Support Unit and local GP Practices.

Learning Layers Healthcare Newsletter http://learning-layers.eu/summer-2014-news-for-healthcare/



Assessment Research

This research explores how best to reconcile the competing challenges of increased reliability and validity in high quality, meaningful clinical assessments.

The LIME 'Assessment Research Group' has wide ranging expertise with a strong programme of Objective Structured Clinical Examination (OSCE) research. Ongoing work includes monitoring the impact of interventions in OSCE design and test formats, including innovative work relating to 'key features' scales. The group is researching the lack of congruence between global ratings and checklist scores, and error variance in performance tests. A sequential testing model of performance assessment for senior undergraduates underpinned by published work relating to longitudinal student performance and resit-remediation issues, has been successfully implemented in Leeds and has been presented at major international events.

Workplace learning



Research has been undertaken with local, national and international partners in academia and clinical settings. Projects have focused on various aspects of gender, learning in clinical settings, simulation, transitions in professional responsibility and understandings about professional identity and multi-disciplinary working. Much of the research is interdisciplinary and informed by contemporary practice-based socio-material understandings of learning.

Use of Technology to Enhance Learning and Teaching

This research strand has a focus on several aspects of student learning, including feedback, generic learning skills, using selfregulated learning to improve academic and clinical performance and the early identification and support of struggling students. The main output of this research strand is to inform curriculum development and student support for the undergraduate course. However, the research has wider applicability and engagement with international partners, and is frequently presented at conferences and in peer-reviewed publications. This research strand also incorporates a series of work streams which are being undertaken as part of a large programme of research and evaluation to explore the impact of mobile learning and assessment on student progression and development.

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A positive attitude towards technology enhanced learning, assessment and student support. I saw at first hand the brilliant work being done in the medical school on this...

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Sir Alan Langlands Vice-Chancellor of the University of Leeds

Medical app makes THE shortlist

A team within the Leeds Institute of Medical Education has been shortlisted for the Times Higher Education Outstanding ICT Initiative of the Year award.

The team used feedback from a healthcare report to create an eBook and app for teaching first year medical students the acute medicine module.

The Recognising and Responding to Acute Patient Illness & Deterioration (RRAPID) programme uses simulation-based teaching methods to introduce students to the different types of acute illnesses and gives tips on how to spot and treat them.

The 'ABCDE' approach takes the students through how to view signs of acute illness by checking airway, breathing, circulation, disability and exposure. The App also has a checklist of things to look out for, a case log for students and a self-test area.

The RRAPID initiative was co-directed by Dr Andrew Lewington and Dr Bruce Duncan after a 2007 National Institute for Health and Care Excellence report found deficiencies in the recognition and treatment of acutely ill patients. One of the changes NICE recommended was to improve the teaching and education of this topic across all levels.

The team is now developing a new app based on the success of RRAPID, designed to take medical students through different levels of clinical skills. The Times Higher Education awards ceremony takes place on Thursday 27 November 2014



RRAPID is available as an eBook or App.

Delivering expertise in Massive Open Online Courses (MOOCS)



Dr James Pickering from LIME's Division of Anatomy this year developed one of the first University of Leeds 'Massive Open Online Courses' (MOOCs) 'Exploring Anatomy - The Human Abdomen'. This is a new form of online education which is free to all and has no entry requirements and is delivered through Future Learn **www.futurelearn.com**

The course is notable for integrating anatomy teaching with specialist input from surgeons, pathologists, radiologists and scientists. This carefully integrated approach provides students with the tools necessary to apply their new-found anatomical knowledge to the understanding of a variety of clinical and research scenarios drawn from real-life activities at the University and associated NHS Trusts.

The MOOC was extremely well received. Around 8,500 people enrolled on the course. 56% of these engaged with the material and 17% of them completed it. This compares well with a typical MOOC completion rate of 5-10%. In student feedback, 97% of respondents rated the MOOC as "good" or "excellent".

Prospective participants can find out more at **www.leeds.ac. uk/info/30311/learning_at_leeds/1980/moocs** Dr James Pickering has had his efforts recognised recently through receipt of the Learning Technologist of the Year award from the Association for Learning Technology, a national award that runs across the entire education sector and celebrates excellent practice in the learning technology field.

He has also been shortlisted for the Times Higher Education 'Most Innovative Teacher of the Year' award, following the success of his innovative use of blended learning resources, including the high-profile massively open online course (MOOC) on the Anatomy of the Abdomen.



We are planning exciting additions to this programme of work including a clinical skills e-book, an e-book guide to clinical practice and work to extend the reach of mobile across all 5 years of the curriculum (campus and clinical).

More information on the Mobile Learning Programme can be found at: medhealth.leeds.ac.uk/info/840/impact_and_innovation/813/mobile_learning

Students first to complete new 'Students without Borders' Languages programme

The 'Students without Borders' (SWB) medical languages programme is a bespoke programme in French or Spanish for Medical and Dental students. The programme is the result of an idea initially put forward by one of our former students Dr Colin Coulter. The success of the programme is a result of strong collaboration between the University's School of Medicine and School of Languages, Cultures and Societies. We congratulate our students on their success.



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I like being able to continue and develop my skills in Spanish, especially in a setting that is relevant to my future

SWB Student

Section 4 Sharing Knowledge, Skills And Experience

LIME undertakes many activities to ensure that new educational knowledge is created and shared. We believe such sharing of knowledge to be fundamentally a social process.



Modernising Undergraduate Medical Education in the Eastern Neighbouring Area (MUMEENA)

MUMEENA is a ≤ 1.3 m Tempus European Project which started in October 2011 and is due to complete in Oct 2014. The project involves 4 collaborating Medical Schools in the EU, one of which is Leeds working with three Eastern European partner countries (Azerbaijan, Ukraine and Georgia). The aim of the project is to improve medical education and training in Eastern Europe.

The Leeds institute of Medical Education (LIME) team has led the project successfully over the last 36 months. The MUMEENA teams in the collaborating and partner countries have introduced pilot courses in Case Based Clinical Reasoning (CBCR) and Research Skills (RSC) into the Undergraduate Medical curricula within Azerbaijan, Georgia and Ukraine. The teaching material for the new courses have been developed and translated into the relevant languages by country specific team members. Teacher Training Centers in Georgia and Ukraine have been established. MUMEENA delegates have had training in CBCR in Utrecht, on Faculty Development in Leeds, on Research Skills in Granada and on Public Health in Rome.

For further information on the project please visit: **www.mumeena.eu**



Delivering an annual programme of Continuing Professional Development (CPD) activities and Educational Conferences



Through an annual programme of high quality Medical Education CPD and conference activity we aim to enhance the quality of Medical Education.

A range of activities is provided, including face-to-face workshops, conferences (including a national Student Support conference), E-learning courses (LITE BITES) and opportunities for shared learning through facilitated networks of medical education practitioners and specialists.

Our workshops and courses have been mapped to the General Medical Council's (GMC) framework of standards and the Academy of Medical Educators (AoME) professional standards, this to assist our medical educator delegates in accessing the most appropriate CPD activities for them. Access to the majority of our provision is free to those involved in teaching Leeds medical students and many events are open to external delegates.

44 I found everything useful, great teacher and students

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CPD Course Delegate

To find out more visit our website: http://medhealth.leeds.ac.uk/mededcpd

Promoting Research Excellence in Medical Education



Leeds Institute of Medical Education was delighted to host our Sixth Annual Yorkshire Medical Education Research Development (MERD) Conference on 23 June 2014. Although it is largely a regional meeting there were also delegates from Cardiff, Bedfordshire

and Edinburgh. The MERD meeting is for anyone interested in or involved with research about healthcare professional education and practice, particularly those new to and inexperienced in this discipline. The meeting is supported by the national Association for the Study of Medical Education (ASME). Dr Lynn Monrouxe (pictured), Reader in Medical Education and Director of Medical Education Research at the School of Medicine, Cardiff University was the keynote speaker. Lynn's talk 'Challenging dominant paradigms in medical education research' was enjoyable and thought provoking. Lynn considered some of the underlying assumptions of research in medical education, highlighted resultant challenges and suggested some ways forward for researchers. The event also included a number of short research reports and poster presentations. There were two afternoon workshops – one on writing for publication and one on working with quantitative data. The MERD day was very well received and had excellent evaluations.

Section 5 Sharing Learning

Selected publications

Bickerdike S, Whittle SR, and **Pickering JD** (2014). Do lecture audio-recordings support engagement and flexible learning? Med Educ. 48 (5): 522-523.

Clancy JA, Johnson R, Raw R, Deuchars SA and **Deuchars J** (2014). Anodal transcranial direct current stimulation (tDCS) over the motor cortex increases sympathetic nerve activity. Brain Stimul. 7(1): 97-104.

Davies CM, Hackman, L and **Black SM** (2014). The foot in forensic human identification – a review. Foot (Edinb.) 24(1): 31-6.

Davies C, Hackman L and **Black S** (2014). The persistence of epiphyseal scars in the adult tibia. Int J Legal Med. 128(2): 335-43 Dennerlein S, Rella M, Tomberg V, Theiler D, Treasure-Jones T, Kerr and Trattner C (2014). Making Sense of Bits and Pieces: A Sensemaking Tool for Informal Workplace Learning. In Open Learning and Teaching in Educational Communities (pp. 391-397). Springer International Publishing.

Fuller R and **Joynes VCT** (2014). Should mobile learning be compulsory for preparing students for learning in the workplace? British Journal of Educational Technology; doi. 10.1111/bjet.12134

Fuller R, Pell G and **Homer MS** (2013). Longitudinal interrelationships of OSCE station level analyses, quality improvement and overall reliability". Medical Teacher. 35.6: 515-517.

Homer MS, Setna Z, Jha V, Higham J, Roberts TE and Boursicot K (2013). Estimating and comparing the reliability of a suite of workplace-based assessments: an obstetrics and gynaecology setting", Medical Teacher. 35.8: 684-691.

Kilminster S and Cottrell D (2013) Educational Supervision in K. Walsh (ed) Oxford Textbook of Medical Education Oxford. Oxford University Press.

Kilminster S and **Zukas M** (2013). Responsibility matters: putting illness back into the picture Journal of Workplace Learning 25(6) 383 – 393

Ley T, Cook J, Dennerlein S, Kravcik M, Kunzmann C, Pata K, Purma J, Sandars J, Santos P, Schmidt A, Al-Smadi M and Trattner C (2014). Scaling informal learning at the workplace: A model and four designs from a large-scale design-based research effort. British Journal of Educational Technology.

Long J, Roberts DJH and Pickering JD (2014). Preservation of cranial nerves during removal of the brain for an enhanced student experience in neuroanatomy classes. Clinical Anatomy 27 (1): 20-24.

Pell G, Fuller R, Homer M and **Roberts T** (2013). Advancing the OSCE: Sequential testing in theory and practice. Medical Education. 47.6: 569-577.

Pickering JD (2014). Anatomy drawing screencasts: Enabling flexible learning for medical students. Anat Sci Educ. August; epub ahead of print.

Sandars J, Patel R, Steele H and McAreavey MJ (2014). Developmental student support in undergraduate medical education: AMEE Guide No.92. Medical Teacher, Vol.36, No. 12, 1015-1026.

Thalmann S, Borntrager V, Treasure-Jones T, Sandars J, Maier R, Widmann K and Kerr M (2013). Designing Scalable Informal Learning Solutions with Personas: A Pilot Study in the Healthcare Sector in Proceedings of the 8th European Conference on Technology Enhanced Learning, Paphos, Cyprus, Springer Berlin Heidelberg, 641-642.

Zukas M and **Kilminster S** (2014). The doctor and the blue form: learning professional responsibility. In T. Fenwick & M Nerland (eds), Reconceptualising Professional Learning: sociomaterial knowledges, practices, and responsibilities. London: Routledge.

Selected presentations / projects

Bickerdike S, Smith L, Dean A, Kozieradzka-Ogunmakin I and **Lewington A.** "Mobile Technologies to Support the Delivery of the RRAPID (Recognising and Responding to Acute Patient Illness and Deterioration) Course to Medical Students". Association for Learning Technology Annual Conference. Warwick, September 2014.

Boursicot K, Fuller R, Govaerts M, Wools S and **Roberts TE.** Validity issues in medical education assessment (symposium). Ottawa 2014.

Boursicot K, Fuller R and **Roberts T**. Are our assessments really valid? Using validity paradigms to design and evaluate programmes of assessment, Ottawa 2014

Chambers B and **Pickering JD**. Optimal approach to oesophagectomy. British Association of Clinical Anatomists Scientific Meeting, Manchester, December 2013.

Davies C, Hackman L and **Black S.** The role of epiphyseal scars in skeletal age estimation. Age Estimation Symposium, Society for the Study of Human Biology/ British Association of Biological Anthropology and Osteoarcheology, Oxford, December 2014.

Dean A and **Lewington A**. "Developing electronic resources to support the delivery of a simulation course to medical students". Association for the Study of Medical Education Annual Conference. Edinburgh, July 2013.

Fuller R. Meaningful Workplace based Assessment (by invitation). International Advanced Assessment Course, London, 2014.

Fuller R, Davies-Muir A. Workplace Based Assessment (by Invitation). Royal College of Paediatrics and Child Health, 2014.

Fuller R and Pell G. Improving your OSCE: measurement, recognition and remediation of station level problems, Ottawa 2014.

Fuller R and Pell G. Introducing a practical guide to sequential testing: economic and educational benefits. Ottawa 2014.

Fuller R, Pell G and **Homer MS**. Dealing with the challenge of meeting assessment needs of competent and underperforming students. Introducing a practical guide to sequential testing. AMEE. Milan 2014.

Fuller R, Pell G and **Homer MS.** Improving your OSCE: Measurement, Recognition and Remediation of Station Level Problems. AMEE. Milan 2014.

Homer MS. Some reflections on Rasch and IRT. ASME ASM. Brighton. 2014.

Homer MS, Pell G and Fuller R. Checklist item weighting: theoretical, psychometric and empirical perspectives. AMEE. Milan 2014.

Jackson P and Roberts DJH. Assessment of anatomical landmarks as reliable predictors of the course of the Spinal Accessory Nerve in the posterior cervical triangle. British Association of Clinical Anatomists Scientific Meeting, Plymouth, July 2014.

Joynes V and **Fuller R.** "We are a Generation Who Learns Things Just by Doing': Exploring the Impact of Mobile-enhanced Learning on Medical Undergraduates and Qualified Doctors'". British Sociological Association Annual Conference. Leeds, April 2014.

Naylor T and **Pickering JD.** Surgical anatomy of the pectoral nerves in relation to nerve transfers. British Association of Clinical Anatomists Scientific Meeting, Manchester, December 2013.

Nicholls G, Baldwin K and Danks N. Producing a Future Proof Workforce. Oral Presentation Royal College of General Practitioners Annual Conference, October 2014.

Nicholls G, Wilkinson D, Danks D and Stroud L. Selecting for Excellence Project, Medical Schools Council. Work experience: a deterrent to applicants to medicine from widening participation backgrounds? Funded project £12,000. 2014.

Pell G and **Homer MS**. Workshop on measuring assessment quality in OSCEs, psychometrics and standard setting. School of Medicine, Liverpool. Liverpool.

Pickering JD. Anatomy screencasts as a teaching tool to promote flexible learning and student engagement. British Association of Clinical Anatomists Scientific Meeting, Manchester, December 2013.

Pickering JD. Development of an anatomy e-book to promote flexible learning. University of Leeds Student Education Conference, January 2014.

Pickering JD. Creating Anatomy OERs for Multi-Platform Teaching. HEA Changing Landscapes Series, Leeds, March 2014

Pickering JD. Integrating multi-media eBooks in to medical education to support flexible learning, Association of Medical Education in Europe Annual Conference, Milan, September 2014.

Roberts DJH. The Leeds Thiel Cadaver Facility. Yorkshire & Humber Clinical Skills and Simulation Conference, Leeds, July 2014.

Santos P, Cook J, Treasure-Jones T, Kerr M and Colley J. Networked Scaffolding: Seeking Support in workplace learning contexts. Proceedings of the 9th International Conference on Networked Learning 2014 (Edinburgh, UK).Smith, A and Pickering, JD. Assessing the Usefulness of Simon's and Joll's Triangles in Thyroidectomy. British Association of Clinical Anatomists Scientific Meeting, Plymouth, July 2014.

Stone E, Burke J and **Roberts DJH.** Injury and entrapment of the mandibular nerve: A cadaveric study. British Association of Oral Surgeons Scientific Meeting, Cardiff, September 2013.

Tomberg V, Smadi M, Treasure-Jones T and Ley T. A Sensemaking Interface for Supporting Doctor's Learning at the Workplace – A Paper Prototype Study. In ECTEL meets ECSCW 2013: Workshop on Collaborative Technologies for Working and Learning Cyprus, Sept. 21, 2013.

