

# Work-Learn-Educate: the WLE Centre for Excellence's conceptualisation of work-based learning

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## Abstract

**Purpose** - The paper explores efforts to bridge conceptualisation and practice in work-based learning by reflecting on the legacy and sustainability of the Centre for Excellence in Work-based Learning for Education Professionals at the Institute of Education, University of London. The Centre was part of the national CETL initiative (2005-2010) and focussed on exploring ways of transforming current models of work-based learning (WBL) in a bid to respond to the diversity of professional learning needs within education and beyond.

**Design/methodology/approach** - The paper presents three case studies which are representative of the Centre's approach to drive theoretical development in WBL.

**Findings** - The three projects featured contributed to the development of WBL through synergetic cross fertilisation while operating independently from each other. Also, they are characterised by sustainability beyond the end of the CETL initiative. The *Putting Knowledge to Work* project developed and operationalised the concept of recontextualisation for WBL in successfully moving knowledge from disciplines and workplaces into a curriculum; and from a curriculum into successful pedagogic strategies and learner engagement in educational institutions and workplaces. The *London Mobile Learning Group* developed a research dynamic around theory and practice of learning with mobile media which contributed to the development of new approaches in (work-based) learning. The *Researching Medical Learning and Practice* Network created a community of practice bringing together educational researchers with medical education practitioners and researchers resulting in a greater understanding of how professional attitudes and practices develop in both undergraduate and postgraduate contexts.

**Originality/value** - The experience of the WLE offers an example of innovative ways to continue to develop our understanding of work-based learning and inform practice. The impact of the WLE activities on theory, policy and practice is evident in the creation of national and international platforms strengthening existing institutional links.

**Keywords** Higher education, CETL, work-based learning, recontextualisation, mobile learning, community of practice.

**Paper type** Case studies

## **Introduction**

This article reflects on the precepts, organisation, impact and legacy of the Centre for Excellence in Work-based Learning for Education Professionals. The Centre was part of the national CETL initiative between 2005 and 2010. The first section discusses the background of the WLE (Work-Learn-Educate) centre and explores its contribution through its specific focus on work-based learning to the dynamic of change initiated and driven by the CETL programme. Section 2 explores WLE activities and their respective contribution by presenting three case studies (Putting Knowledge to Work, (Work-based) Mobile learning and the Researching Medical Learning and Practice Network). Section 3 draws some conclusion about the overall impact of the CETL and its legacy and sustainability and offers some recommendations regarding the prospective ways to continue to develop our understanding of work-based learning and inform practice.

## **The WLE and the CETL**

### *Background to the CETL*

The CETL initiative sought to reward excellent teaching practice and to further invest in that practice so that CETL funding produces substantial benefits for students, teachers and institutions (HEFCE, 2003; Saunders *et al.*, 2007). The WLE sought to contribute to these aims by exploring ways of transforming current models of work-based learning (WBL) in order to respond to the diversity of professional learning needs within education and beyond. The Centre - in keeping with the mission of the research intensive institution in which it was located - undertook, and used research to enhance professional practice in a variety of workplace settings. It developed an extensive R&D programme which pushed back the boundaries of existing knowledge in relation to professional practice and conceptual understanding in two key areas of teaching and learning in HE: WBL and the use of technologies for teaching and learning. The Centre placed considerable emphasis on interdisciplinary approaches and international/cross-professional collaboration which enriched academic thinking amongst participants and enabled innovative work across diverse contexts. It approached WBL through work-related programmes and through initiatives in the workplace. The Centre aimed to develop new approaches in WBL through facilitating innovation in:

- learning at work and through professional practice;
- teaching and assessment modes for work-related and work-located learning;
- uses of e-learning, mobile learning and digital technologies;
- developing new conceptual and theoretical approaches to WBL.

The development of this research and innovation dynamic was intended to feed into the teaching community at the Institute of Education and beyond in its partner institutions, creating synergies, generating new practices in teaching, learning and assessment contributing to a better understanding of WBL to complement and often narrow focus on employability, preparedness, productivity and the individual learner's skills and abilities.

### *Theory and drivers of change*

The theory of change, understood as "a systematic and cumulative study of the links between activities, outcomes and contexts of the initiative" (Connell and Kubisch 1998, 16), behind the whole CETL programme was based on the principles of Reward and Recognition and revolved around three main propositions: excellent teaching produces excellent learning; recognising individual and institutional excellence in teaching and learning promotes excellence across the sector; a relatively light steer on specific designs for excellence.

Accordingly, the theory of change developed by the WLE Centre considered practitioners to be the key drivers of change. That is why the centre operated with a very slim staffing structure (three part-time academic staff internally seconded to the Centre, a full-time Centre Manager and part-time technical support) and that, in line with the aim of rewarding good practice, most of the budget was spent on providing opportunities for colleagues to step back from aspects of their practice and to reflect on it critically through research and development projects. In addition, colleagues were seen as key multipliers of new practices. This flexible structure was key in moving forward the three complementary drivers of change initiated by the Centre to contribute to WBL: the Sponsorship of R&D projects on professional practice; an effective use of new technologies; the dissemination of research findings and practice to inform and illustrate what is and what is not possible.

*The dynamic of change, in the context of which the cases presented in this paper have to be read, was driven by key resources built over the five year programme include:*

- intellectual and academic capital through a dynamic of research projects informing pedagogic practices in and across complementary strands: theory-building in WBL; lifelong learning; international links; teacher education provision; technology-enhanced teaching and learning including multimedia pedagogy for professional learning, mobile learning and e-learning; social justice, equity and diversity related material etc.
- a physical and a virtual Centre (a fully operational digital TV studio with a film screening facility; a specialised digital video editing facility, a digital video repository and a state-of-the-art video conferencing facility) supporting activities face-to-face, mixed-mode and at a distance;
- a multi-faceted approach to dissemination with a multifunctional Centre website ([www.wlecentre.ac.uk](http://www.wlecentre.ac.uk)) at the core (containing project sheets and reports, publications, online bibliographies; dissemination events; conferences and symposia etc) and the development of communities of practice (as evidenced in some of the case studies presented in this paper).

### **The WLE evidence: some case studies**

The Centre funded more than one hundred projects over 5 years and has initiated and hosted many dissemination events. It is, therefore, difficult to offer a synthesis of the theoretical and practical impacts of the activities of the WLE across the sector in the limited space available. Therefore, a case study approach was adopted to examine the main strands of activities of the centre (Gomm *et al.*, 2010).

The following discussion will concentrate on three case studies which are representative of the Centre's aim to drive theoretical development on WBL in order to influence practice. Whilst they are all firmly located in the aims of the Centre delineated above, they were not interconnected.

The data used are extracted from the final evaluation of the centre (Carpentier, 2010). This document sought to provide formative feedback to the Centre, its staff and its internal and external stakeholders as well as to inform the overall evaluation of the HEFCE-funded Centre for Excellence in Teaching and Learning programme. Quantitative and qualitative data were collected from a range of sources including

- Desk research: a review of the documents which delineate the process of construction and development of the WLE Centre's identity within the CETL framework. These include documents which outline the maturation of the Centre's thinking and its articulation as well as the ongoing records of the activities of the Centre (minutes from meetings, statistics and documents related to the variety of outputs, research projects and dissemination activities, proposal/project sheets/reports);
- Observation: participation in activities of the Centre and regular attendance at internal meetings including staff, associates and management but also meetings with staff and students of the Institute; attendance at the dissemination events organised by the Centre (conferences, seminars, book launch)
- Questionnaire: e-mails were sent to staff involved in Centre projects over the years, users and stakeholders to explore stakeholder perspectives and perceptions (45 respondents)
- Follow up semi-structured interviews of technical and academic staff, associates, students associated with the Centre but also from other parts of the Institute and other stakeholders (more than 25 interviews).

The collection, processing and interpretation of data were carried out with particular attention to ethical issues in conformity with the BERA Guidelines for evaluators (UK Evaluation Society).

### *Putting knowledge to work*

Rethinking concepts and models of WBL is a commitment that has run through the work of the Centre from its inception. The project *Putting Knowledge to Work* (PKTW), originally

sponsored by the London Chamber of Commerce and Industry Commercial Education Trust and the Economic and Social Research Council, has focused on the longstanding challenges of 'integrating' subject-based and work-based knowledge in programmes leading to qualifications. These challenges have typically focused on questions of how learning can be 'transferred' from one setting to another, usually from theory into practice. Karen Evans, David Guile and Judy Harris have developed a fresh approach that concentrates on different forms of knowledge and the ways in which these are contextualised and 'recontextualised' as people move between different sites of learning in colleges and workplaces. This new thinking has been grounded initially in an exploration of Foundation Degrees, intermediate level qualifications and non-accredited professional upskilling. Subsequently it has been extended to all forms of work-based higher education, particularly in health and medical education which is a key community of practice initiated by the Centre. The aim has been to improve practice in WBL by researching how the subject-based and work-based aspects of a curriculum or learning programme can articulate with one another more effectively. In a field that has come to be dominated by consideration of organisational arrangements and technical issues that accompany credit and quality assurance frameworks, questions of knowledge, teaching and learning have been relatively neglected. Through our use of the concept of recontextualisation, we have introduced fresh thinking that can find ways into longstanding and seemingly intractable problems. For knowledge generated and practised in one context to be put to work in new and different contexts, it has to be recontextualised in various ways. The *Putting Knowledge to Work* research has shown, through the concept of recontextualisation, what is involved in successfully moving knowledge from disciplines and workplaces into a curriculum; from a curriculum into successful pedagogic strategies and learner engagement in educational institutions and workplaces.

The starting point is that all knowledge has a context in which it was originally generated. Contexts are often thought of as settings or places, but contexts in our use extend to the 'schools of thought', the traditions and norms of practice, the life experiences in which knowledge of different kinds is generated. For knowledge generated and practiced in one context to be put to work in new and different contexts, it has to be recontextualised in various ways that simultaneously engage with and change those practices, traditions and experiences.

Recontextualisation is multi-faceted. It refers to the idea that concepts and practice change as we use them in different settings. We have drawn on developments of Bernstein's idea that concepts change as they move from their disciplinary origins and become a part of a curriculum (2000). We have also drawn on van Oer's idea that concepts are an integral part of practice and that practice varies from one workplace to another (1998). We have substantially expanded both of these notions in order to embrace the way in which learners change as they recontextualise concepts and practices and the extent to which this process may spur innovation in workplaces as much as in educational contexts.

Chains of recontextualisation can be forged by practitioners, as they seek to improve practice through the integration of subject-based and work-based knowledge. Four modes of recontextualisation have been identified as significant for this purpose. Each expression of recontextualisation sheds light on some element of the challenge of integrating subject-based and work-based knowledge in real-life programmes:

- content recontextualisation (putting knowledge to work in the programme design environment) takes place when knowledge moves from its original context of production (eg academic research community or R&D programme) into the formal learning programme offered by a learning provider. In professional and vocational education it entails the selection and organisation of work and subject knowledge for the demands of professional and vocational practice
- pedagogic recontextualisation (putting knowledge to work in the teaching and facilitating environment) refers to the ways in which disciplinary knowledge is combined with practice based knowledge as it is organised into specific learning activities for the purposes of effective teaching and learning.
- workplace recontextualisation (putting knowledge to work in the workplace environment) takes place through workplace practices and activities that support knowledge development, including mentorship and coaching.
- learner recontextualisation (what learners make of these processes) takes place through the strategies that learners themselves use to bring together knowledge gained through the programme and gleaned from working with more experienced people in the workplace. This process is critical to the development of a professional identity,

These are explained more fully in Evans *et al.* (2011) and in the PKTW published exemplars, all of which are analysed in detail according to the recontextualisation processes ([http://www.wlecentre.ac.uk/cms/files/pktw/book\\_of\\_exemplars.pdf](http://www.wlecentre.ac.uk/cms/files/pktw/book_of_exemplars.pdf)).

The intellectual tool based on modes of recontextualisation led to the production of practitioner materials for recontextualisation (exemplars, cross-cutting themes, guidance notes, research briefing). The approach itself can be recontextualised for use in programmes ranging from apprenticeships to undergraduate and post-graduate programmes that involve substantial elements of practice in work environments, moving beyond the notion of work placements to 'work-integrated learning' with the emphasis on the effectiveness of the learning itself.

Recontextualisation was well received when disseminated nationally and internationally (the American Educational Research Association, the Institute of Adult Learning, Singapore and in the Asia-Europe Network on Lifelong Learning) and have since been taken up by UK higher education and industry practitioners in programmes ranging from 4 year degrees with a professional year. For example, the approach has been highlighted at the Surrey Centre for Excellence in Professional Training and Education (SCEPTRE) national conference

on 'Learning to be Professional' and its take-up to date shows that it has considerable potential for programme developers. Recontextualisation is being used by the Medical profession (as a framework for rethinking the development of doctors' communication skills in the clinical environment); by agencies such as the Linking London Lifelong Learning Network. The FdF organisation set up to promote workforce development is publishing guidance on the approach for the higher education community (Fdf in press). Support for staff development has also been given in the Glass Industry through its Training body and in Nursing and Midwifery Education (Evans *et al.*, 2010). Follow up work is taking place on 'professionals who educate' and their role in knowledge recontextualisation. The development of these materials of recontextualisation represents a crucial bridging between concept and practice to move work-based learning forward.

### *Mobile Learning*

The London Mobile Learning Group (LMLG; [www.londonmobilelearning.net](http://www.londonmobilelearning.net)) was founded in 2007 by Norbert Pachler under the auspices of the WLE Centre as a vehicle to develop new approaches in (work-based) learning through innovative uses of digital technologies. It is a network comprising an international, interdisciplinary group of researchers from the fields of cultural and media studies, sociology, (social) semiotics, pedagogy, educational technology, WBL and learning design. Back in 2007, and to a lesser extent today thanks in part to the contribution of the LMLG, mobile learning was an emerging, if rapidly expanding field of educational research and practice. At the time there existed little theoretical and conceptual work with which to explain the complex interrelationship between the characteristics of rapid technological developments, their potential for (work-based) education and learning as well as their embeddedness in the everyday lives of users.

In a first step, in the form of a socio-cultural ecology, the LMLG developed a general theoretical and conceptual framework in which educational (incl. work-based) uses of mobile technologies are viewed as part of a social, cultural, economic, educational and technological context in transformation for which the term 'mobile complex' was coined. Characteristic of these transformations is, for example, the shift away from traditional forms of mass communication towards user-generated content and individualised communication contexts. New relationships between context and production are emerging in that mobile devices not only enable the production of content but also of contexts. They position the user in new relationships with space, the physical world, and place, social space: users of mobile digital devices are being 'afforded' synergies of knowledge distributed across: people, communities, locations, time (life-course), social contexts and sites of practice (like socio-cultural milieus) and structures. By mediating access to external representations of knowledge mobile digital devices provide access to cultural resources. This dynamic digital tool mediation of meaning-making allows users to negotiate and construct internal conceptualisations of knowledge and to make social uses of knowledge in and across specific sites or contexts of learning. Learning, in this model, is governed by a triangular

relationship between socio-cultural structures, cultural practices and the agency of media users and takes place in the interrelationship of these three components:

- agency: the user's capacity to act on the world;
- cultural practices: the routines users engage in their everyday/working lives; and the
- socio-cultural and technological structures that govern their being in the world.

In a second step members of the group have worked on applying this model to, and validating it in formal educational settings, in particular in schools, to ensure it has analytical potential and is operationalisable. To this end a set of guidelines for educators were developed. (Cook *et al.*, forthcoming).

In a third step, members of the group have started to explore the principles and practices of mobile learning in the context of work. On the one hand (Pimmer *et al.*, 2010) they have started to explore what, if any, applicability the socio-cultural ecology of mobile learning has in the field of WBL; they conclude that in parallel to the growing emphasis on structures, practices and agency in mobile learning research there has been a shift in WBL research away from a narrow focus on the learning of the individual to an exploration of socio-cultural perspectives and wider political and societal environment in which it takes place. On the other hand (Pachler *et al.*, 2011), they have collected examples of how mobile devices can be used to support learning and competence development in work contexts featuring heterogeneous groups of learners in manifold industries and work contexts based on different forms of learning and teaching on diverse content/topics and aimed at the development of multifaceted skills and competences.

Work on the comparison of theoretical underpinnings of the fields of WBL and mobile learning by members of the group shows that there exists much overlap across the two domains and that the key concepts as well as the theoretical and conceptual models they draw on are very similar. Activity Theory (Engeström, 1999), for example, is a key concern to both. Yet, the work of the group also shows that key differences exist: terminology central to both domains is not necessarily understood in the same way as it tends to be embedded in different disciplinary discourses at different levels of maturity, for example an organisational perspective in the case of WBL and a cultural and media studies perspective in the case of mobile learning.

WBL in the context of the collection of examples of practice is understood by members of the group as learning at, through and for work (Evans *et al.*, 2010) and includes a range of activities such as learning as part of formal education programmes, placement-based learning, compliance training, but also informal learning through work tasks etc. The proliferation of mobile devices in the work environments of business but also of education professionals, for example, suggests that mobile devices have great potential to transform the way people work and learn. Mobile devices can be seen to impact on the way training and performance support can be provided (e.g. on-demand, just-in-time, just-for-me etc) and, thereby, lead to greater efficiency and supervision. They also, of course, potentially



impact on life-work balance and can result in a weakening of home and work boundaries. A recent collection of cases suggests that some of the functionality of mobile devices lends itself particularly well to use in work contexts: the collection and sharing of, as well as reflection on multimedia evidence of situated learning experiences; their use by highly mobile learners to access remote information 'on demand'; or provision of alternative learning contexts for real-world situations by way of simulations and laboratories which prepare learners for work. The cases show that mobile technologies can be beneficial from an individual or organisational perspective but also that they raise a number of ethical questions which need to be addressed, for example in relation the responsibility of mobile device users with regard to potential vulnerabilities of others such as patients or learners and the attendant need to respect privacy and copyright and establish trust, confidentiality, transparency, accountability, systems around informed consent as well as engage in an in-depth analysis of potential consequences and risks.

The collection of cases (Pachler *et al.*, 2011: 6) reports a mixture of mobile and blended learning scenarios of work-based mobile learning indicative of the surprisingly wide range of mobile device use already in evidence:

- with heterogeneous groups of learners (professional workers, employees, apprentices, students ...),
- in manifold industries and work contexts (machine building, health sector, craft, education, transport ...),
- based on different forms of learning and teaching (creating and consuming content, reflecting, solving problems, discussing, simulating, assessing ...),
- on diverse content/topics (health and safety, electrical engineering, biosecurity, dental hygiene, therapy, geomorphology ...),
- aimed at the development of multifaceted skills and competences (interpersonal, inter-professional, tacit ...).

Current work of members of the group (see Pimmer *et al.*, 2009) revolves around the use of mobile devices to provide just-in-time remote mentor support in the context of workplace learning of clinical practices of hospital doctors. Another area of interest to members of the group is that of the use of mobile devices in the context of development education.

### *The Researching Medical Learning and Practice network<sup>1</sup>*

The WLE has been instrumental in creating and supporting the Researching Medical Learning and Practice (RMLP; <http://snipurl.com/rmlp-network>) network. This community of practice brings together educational researchers, academics and practitioners from a wide range of clinical and mainstream education institutions who share an interest in the learning of practitioners in workplace settings. This network was established originally by the WLE Centre as a special interest group within the doctoral school at the Institute of Education, to

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<sup>1</sup> Acknowledgement: Thanks are due to Viv Cook, Co-ordinator of the RMLP network, Barts and the London School of Medicine and Dentistry, and Mark Newman, Institute of Education, University of London.

support the needs of a growing number of students from medical and clinical education undertaking professional doctorates via the EdD programme. It has now grown to include a wide group of approximately 150 medical education practitioners in undergraduate and postgraduate contexts, who work with those whose occupational role includes diagnosis, therapy, prevention, health promotion, rehabilitation and/or management of care, including medical doctors, nurses, midwives, physiotherapists, speech therapists, health visitors and radiographers.

Analysis of the constitution and effectiveness of networks suggests that bonds or relations between members can be categorised into two main types – ‘weak ties’ and ‘strong ties’. The ‘strength’ of networks with weak ties (Jones *et al.*, 2008) lies in a concept of ‘viral’ effectiveness of membership, in that not all members of the network are in direct contact with each other on any given occasion, and perhaps never meet all other members face to face. Rather, their views, actions and dispositions are affected by membership of a community with a broad dynamic affecting personal decision-making within a wider sense of values and/or practice. The RMLP network has aspects of both strong and weak ties, in that it has been important to establish research seminars and conferences on a regular basis, where familiarity and relationship-building can take place via face to face discussion of shared interests. It has also been important however, to maintain a wider online network, consisting of members who are more loosely connected and may not be able to attend face to face meetings, but who join when they can or where the meeting themes are particularly relevant.

A co-ordinator convenes opportunities for knowledge transfer and critical review of research and its application within medical education and clinical settings, including research undertaken by members. Activities are communicated via the RMLP network pages on the WLE website. The network also works closely with the Association for the Study of Medical Education (ASME) to organise the annual ‘Researching Medical Education’ conference, which has grown in attendance year on year.

A main aim has been to enable knowledge transfer between sociocultural educational research into learning and teaching in WBL, and medical and clinical education. The importance of learning in the workplace has long been recognized in clinical education. The twin demands made by rapid increases in clinical knowledge and the changing landscape of the clinical workplace have increased the need for further understanding of clinical learning in the workplace generally. There is therefore a growing demand from regulators, educators, clinicians and students for conceptual and methodological tools that can help to develop understanding of the complex set of relationships and interactions that are involved in learning in professional healthcare contexts. It is universally acknowledged that learning in and through practice is a key component of clinicians’ education. This basic fact has been recognized in the design of educational programmes for clinical practitioners for many years. However profound developments in clinical knowledge and in the contexts of clinical practice have exposed a lack of detailed understanding of the complexity of this learning

and how to facilitate it in different and changing workplace conditions. Postgraduate education has undergone radical changes as an outcome of *Modernising Medical Careers* (Department of Health, 2004). Specifically training pathways are more clearly delineated and work-based assessment tools are used formatively and summatively as a measure of competence. Historically, there has always been a requirement that doctors teach their juniors. Recently there has been greater emphasis on the 'professionalisation' of teaching, for example, with educational supervisors expected to now be accredited by their Trust. The development of the RMLP network has been timely. The growing emphasis on continuing education, concerns about reaccreditation and about the capacity to deliver training in restructured service settings (e.g. due to EU working time directives), the development of education career pathways for clinicians, continued emphasis on evidence based practice, all suggest that clinical education will be a growing area of policy and practice interest in the medical field. Educational research in work-based contexts shares a core agenda with medical education regarding the need to further explore the nature of professional skills, knowledge and understanding, and the relationship of these with values and identity-building within competence-orientated frameworks of assessment and accountability.

The approaches used by socio-cultural theorists, embedded as they are in the importance of social interaction and cultural contexts, can make an important contribution to our understanding of learning in clinical contexts. For example, communities of practice (Lave and Wenger, 1991; Wenger, 1998), activity theory (Engeström, 1999), non-formal learning (Eraut, 2000) and learner narrative (Cortazzi, 2001) are theories which offer a range of theoretical lenses by which to research and understand practitioner learning within highly complex socio-cultural domains of human activity. The RMLP has provided opportunities for the theoretical exploration of such perspectives and their application to medical education, particularly in relation to critical approaches to programme design, pedagogy and assessment. This has been facilitated by three main types of network activities: a research seminar series (details available at <http://www.wlecentre.ac.uk>), the establishment of an annual research conference (see details at [www.asme.org.uk](http://www.asme.org.uk)) and the writing of an edited volume (Cook *et al.*, Forthcoming). which examines recent research and development in sociocultural theories which have been applied to workplace learning in clinical contexts. Topics explored have included: the extent to which medical student attachments could be viewed as times spent in communities of practice; the use of activity theory as a theoretical tool to analyse medical education as two interacting systems (medical school v clinical attachments) that students have to learn how to occupy and move between; the role of non-formal learning in the WBL of medical teachers; using narrative methodology to understand the learning experiences of primary healthcare practitioners in online communities; actor-network-theory as an exploratory and explanatory framework that challenges the current policy emphasis upon improving 'teamwork'; and social semiotic perspectives on working and learning in the operating theatre, drawing on ethnographic research on what and how theatre staff teach and learn, within and across surgical,

anesthetic and nursing teams, exploring possibilities for high fidelity simulation in postgraduate training.

Such socio-cultural perspectives emphasize the role of social interaction and importance of cultural contexts of learning. Whilst sociocultural theories of learning have been developed, applied and investigated in other educational contexts and in non-clinical workplace learning contexts, there has been limited examination of the application of such theories to WBL in a clinical context.

By bringing together educational researchers with medical education practitioners and researchers who share inter-disciplinary interests, the aim has been to improve understanding of how professional attitudes and practices develop in both undergraduate and postgraduate contexts.

Thus the network serves to deepen understanding of the complex phenomena of clinical workplace learning and provide guidance on how these intellectual tools and concomitant research methods can be used to explore key problems and issues in clinical education and practice. Clear potential exists for linking the work of the LMLG on the use of mobile phones in clinical, A&E contexts with the work of the RMLP on intellectual tools and attendant research methods.

## **Conclusion and recommendations**

### *Impact*

The PKTW's idea of recontextualisation informed the WLE's aim of transforming current models of WBL in order to respond to a diversity of professional learning needs. This involved exploring how learners change as they recontextualise concepts and practices and the extent to which this process may spur innovation in workplaces as much as in educational contexts. The main impact of the WLE Centre work on learners' experience has, therefore, been indirect through the theoretical exploration of WBL and informing practitioner development and understanding in a range of education sectors.

The LMLG offers strong indication that the WLE research in the field of e-learning and digital media also impacted on student experience (Pachler and Daly 2011). A project holder on video recording of teaching sessions for professional development indicated that "a former student on the PGCE course ... created a new module for her teaching in her institution leading to greater awareness of pedagogic practices with her teaching colleagues on the use of video technology". The RMLP has enriched student experience by their inclusion into the Communities of practice in WBL. A medical educator in the final year of the EdD remarked "that the WLE has been supportive to me as an individual but also to my wider professional team" and "has given me a community of practice of like-minded medical educators".

The examples from the case studies signal a global positive impact of the WLE Centre concerning the conceptualisation of work-based learning and its operationalisation in practice.

### *Being a CETL: challenges and opportunities*

There were many advantages to being a CETL. Being part of a national network of CETLs made it easier to establish networks and communities nationally and internationally. Internally, being able to present intellectual activities in the form of a Centre that was funded as part of a national initiative was crucial. Being part of a national network also facilitated liaison with national initiatives. The initial networking on pedagogic research within the CETLs provided by the Higher Education Academy was effective and brokered some relationships between CETLs. For a host of reasons, networking tended not to focus on WBL CETLs: whilst the WLE forged good relationships with other CETLs, the specific interests of the WLE Centre in WBL research and theory, its situatedness in the academic field of education and its focus on the role of technology resulted in links without the field of WBL with close ties developing with the CETL on Reusable Learning Objects (in particular colleagues at London Metropolitan University) as well as ALPS (in particular colleagues at the University of Leeds) on the basis of commonalities of interest outside of WBL.

### *Ways forward*

The issues which were at the heart of the CETL programme are still very important. WBL is one of them and it is important to find ways of moving forward the research and practice agenda on the basis of the theoretical insights offered by the work of the WLE Centre. For details of individual projects see the WLE website ([www.wlecentre.ac.uk](http://www.wlecentre.ac.uk)). The case studies discussed in this paper demonstrate how the CETL initiative presented an important opportunity to develop a coherent and diverse programme to support conceptual research and development in WBL and practice. The cases studies document work in and across different fields which contributed towards the same aims characterised by synergetic cross fertilisation. At the same time, they remained autonomous and able to have a life after the end of the CETL initiative.

The approaches and tools developed through Putting Knowledge to Work are under further development and are being picked up in many parts of the Higher Education Academy, from practitioner doctorate level to Foundation Degrees, 'short-cycle' HE and industry-education partnerships/consultancy. Work-based mobile learning is starting to emerge as a potentially exciting field of academic inquiry. With the normalisation of mobile devices and the increasing market penetration of smartphones, mobile learning is arguably a key aspect of technology-enhanced teaching and learning and is of potentially great significance in all aspects of teaching, learning and assessment. The RMLP potential is still substantial as brokering of relationships between medical education and educational research and important to the future strategic development of research-informed medical education practice.

## *Recommendations*

The CETL programme offered colleagues and students spaces for reflection on their practice, engagement with others and support for concerns. This has been recognised by WLE users who have particularly valued the opportunities offered by a participative community, such as 'standing back and looking forward' ("the WLE brought me into a world more focused on workplace learning...and changed the way I think of work, learning and expertise"), sharing concerns, experiences and projects ("The openness of the Centre made access and contact to the different research communities within the WLE very easy") and being supported by a group ("The WLE provided a useful space for exploring ideas and potential 'boundary crossing'").

It will be crucial, and difficult in the current financial climate, not only to maintain the spaces for staff and students to reflect on their practice and engage with each other beyond the HEFCE-funded period of the WLE Centre, but also to maintain the efforts to bridge conceptualisation and practice in work-based learning. In view of financial exigencies, there is a need now to find other spaces to move forward. The questions of impact and sustainability have always been central considerations of the CETL programme and are even more important today. The 2008 global economic downturn of the economy has produced a challenging funding context and at the same time created new demands for innovative practices in relation to WBL.

It is essential for the activities, communities and practices developed during the duration of the CETL programme to find ways to continue to operate (albeit in view of the absence of HEFCE funding, in a revised form). They will have to seek to preserve their space (or find new spaces) at the interface of complementary institutional, national and international sites of WBL. The impact of the activities discussed in the case studies on theory, policy and practice has created national and international platforms for sustainability and they have strengthened institutional links. This is evidenced by a clear recognition of the potential contribution of the WLE Centre to at least three of the four platforms of the current Institute of Education, University of London Strategic Review (open mode; professional education; international strategy). Like many HEIs, the Institute of Education is revisiting its strategic priorities in the light of significant changes to the policy and funding context in which it operates and it is pleasing to see that the work of the WLE Centre is able to feed into this process.

The world of higher education is currently witnessing a period of significant change and uncertainty with the very purpose of university-based learning becoming the subject of heated debate and controversy. It is very unlikely in our view that the outcomes of these debates will lead to a diminution of the importance of work-based learning and the three case studies presented in this paper can be seen to offer a clear trajectory for the contribution universities can (continue to) make in the future:

- conceptualising and re-conceptualising relevant knowledge bases to ensure the continued availability of the necessary knowledge, skills and understanding to enable the best possible functioning of society and the economy,
- researching and developing new approaches to teaching and learning to ensure the highest possible quality of student experience, and
- providing spaces for exchange, scholarship and research in multi-, cross- and interdisciplinary networks and communities of practice bringing together practitioners and academics to ensure the endeavours of university are informed by what happens in the world of work and everyday life and that these practices are underpinned by theoretical understanding.

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