Abstract Practitioner Inquiry has been promoted as a means for people to research their own practice within many work-based contexts (e.g. education, social-work & health). Practitioner inquiry within work-based learning focuses on bridging the divide between academia and the employer. Yet in our endeavour to promote work-based learning we often forget the role of educational institutions in educating their own academics. In this context co-operative learning involves the lecturer as a student of his or her own practice, taught by other academics and supported by their educational employer. At the Open University, the largest distance education provider in the UK, this approach has been used to support educational professional development amongst both full and part-time academic staff. This paper reviews the use of practitioner inquiry as a tool for furthering educational work-based learning within three ‘Centres for Excellence in Teaching and Learning’. Over 40 projects have been conducted by lecturers from a variety of different disciplines all with a focus on practice-based reflection and the dissemination of good practice. Examples from these projects will be used to highlight the processes involved in researching teaching practice and the support needed. The consequences of practitioner inquiry on the practice and professional development of lecturers involved in the projects will be discussed, as well as bottlenecks in empowerment for and limitations in organisational change.

Keywords—Technology enhance learning, medical education.

1. INTRODUCTION

The concept of work-based learning has grown in importance over recent years. The increased attention on work as both a place and focus of learning may be the result of what Nikolou-Walker and Garnett [14] term a “paradigm shift from an industrial to a knowledge society” (p. 298). Despite this paradigm shift, there is surprisingly little sense amongst the employees of higher education institutions of the concept of practice based learning for themselves. Lecturers and associated teaching staff, in particular, lack an understanding that their own knowledge can be developed not just from academic specialities but also from their own teaching practices.

Practitioner inquiry is an extension of action research which has been used effectively within practice based contexts for several decades [15]. This approach to research supports the development of knowledge contextualised within specific contexts of practice and is especially suited to work-based learning. Practitioner inquiry, in particular, emphasises the role of collaboration in the inquiry and learning process. The role of peer support, esteem and inquiry is especially important within the academic domain. It seems reasonable then to assume that a development of these approaches to lecturer learning and development would be appropriate. This paper, therefore, seeks to address the issue of work-based learning as a means of professional development for University lecturers, and particularly the role that practitioner inquiry can play in this.

The research described here focuses on three Centres for Excellence in Teaching and Learning (CETLs), at the Open University, the largest distance education provider in the UK, namely the Centre for Open Learning in Mathematics, Science, Computing and Technology (COLMSCT), the Centre for Personalised Integrated Learning Support (PILS) and Practice-based Professional Learning (PBPL). The CETLs, part of a UK-wide initiative, have been established to recognise existing excellent teaching practice and invest further in developing this excellence in order to deliver substantial benefits to students, teachers and institutions. The approach taken at the OU has been to recruit both full-time and part-time lecturers to conduct small-scale inquiries on themes related to teaching and learning, either directly involving their own practice and students, or developing products, such as student support
software, and teaching materials for potentially wider use. Over 200 lecturers were recruited in the first two years of the initiative, and are investigating issues such as computer-marked assessment, student progression, and work-based learning.

II. BACKGROUND

This paper is based on the assumption that work-based learning (WBL) and continuing professional development (CPD) are closely related, if not the same. Within the United Kingdom, however, definitions of both terms vary greatly according to context.

In a consultation paper for the UK Council for Industry and Higher Education (CIHE), work-based learning is defined as learning which “involves the gaining of knowledge and competencies in the workplace” [5]. Within WBL there has traditionally been a distinction between work-based knowledge, related to the immediacy of practice (Mode 1 knowledge) and knowledge (Mode 2 knowledge) where problem-based activities are academically contextualised [1]. As a result, work-based learning is well-established in health and social care [7; 13], yet there has been little overlap between workplace requirements and University education in other sectors. The CIHE definition is supported by Solomon et al.’s [18] assertion that workplace learning is primarily positioned outside an academic institution, and also conforms to Avis’ [1] distinct gap between Mode 1 and Mode 2 learning. In recent years, however, the UK move towards a more market-based approach to education (characterised by mass development of and larger numbers in higher education) has resulted in a lessening of this gap. Innovations, such as the introduction of Accreditation of Prior Learning (APEL) and Foundation Degrees, have therefore sought to bring the workplace into the University and vice versa. Costley and Armsby [6] distinguish between WBL as a mode of study, in a University subject, or as a field of study, based in practice. This suggests a more fluid definition of work based learning is appropriate, such as that offered by Nikolou-Walker and Garnett [14] as ‘learning in, from, through, to and at work’ (p. 305). However, the development of these work-based learning theories for academic practice is still limited.

Friedman and Phillips [9] in a review of promotional CPD literature produced by professional associations, identify two strands of CPD: the first as learning that will foster personal development and produce professionals who are “flexible, self-reflective and empowered to take control of their own learning”; and the second as a means of “training professionals to fulfil specific work roles and as a guarantee of individual, professional competence” (p. 361). Taking the loose definition of WBL suggested above, it would appear that CPD, located as it is within the workplace, is indeed a form of work based learning. However, despite the pervasive nature of both terms, there is little written to explicitly define the relationship between these two.

Surprisingly, higher education has lacked direction in CPD and work-based learning for academics. Saunders [16] described the vacuum of staff development opportunities for lecturers in Higher Education institutions compared to schools and colleges. However, the arguably more consumerist expectations of students that have come about as result of the introduction of tuition fees have meant that this situation is changing. There are now opportunities for training and accreditation across the HE sector. It is, however, the case that within the educational field in general, the focus is on CPD and not on work-based learning. Indeed, with a few exceptions [10; 18], there is little or no reference to HE institutions as workplaces. The reasons for this may be historical and status-related, inferring that employment as a lecturer in higher education is a profession and not work. However, using Nikolou-Walker and Garnett’s [14] definition it is the authors’ assertion that professional development opportunities available to lecturers in higher education, relating as they do to their development ‘in, from, through, to and at work’ are indeed work based learning.

Practitioner inquiry, in terms of investigating one’s own practice, has been a feature of work-based learning and continuing professional development for a number of years. In teaching, the evaluation of one teachers own scholarship has long been part of teacher education and also their CPD [3,17]. Similarly, in the health and social care sector, inquiry into practice is fundamental to an understanding of individual practice and as a way of improving service to patients and consumers [7,13]. Despite its widespread use in schools and colleges, practitioner inquiry is less well-established in higher education.
as a means of professional development amongst university lecturers. This may be related to the relatively late development of CPD in HE, although Harland and Staniforth [10] argue that this is due to lecturers’ poor regard for scholarship research in comparison to their principle field of study.

Practitioner inquiry [8] is a development of the more established and related method of action research [4]. However, action and improvement are not inherent within practitioner inquiry as lecturers are encouraged to explore all issues relating to teaching. Action may therefore be the result of this approach but it may also be an opportunity to reflect more broadly on the issues raised. The term ‘research’ also carries with it a particular meaning within the Higher Education setting creating expectations as to the nature of this research which may be a barrier to less experienced researchers. This research therefore use the term ‘practitioner inquiry’, drawing on action research but providing a looser framework for practitioners to inquire into and reflect on their own and others practices.

III. METHODS

Three distinct case-studies were conducted for this paper these were conducted through the PILS, COLMSCT & PBPL projects. Data were collected through a number of different methods including semi-structured interviews and ethnographic data, drawn from observation by the authors.

The data from COLMSCT & PBPL projects were collected over a 6 month period through project team observations and research method support sessions. The projects varied from those individually co-ordinated and supervised to those developed and managed by teams. An ethnographic approach to data collection was taken whereby qualitative descriptions of human social phenomena were collected based on field notes. An ethnographic approach was taken as it allowed the results to retain a holistic quality that was deemed necessary for this research. Many of the issues identified could not have been understood as independent variables quantified in isolation.

IV. RESULTS

The qualitative data collected was analyzed thematically so that key strands were identified and relationships between sub-concepts mapped out. From the wealth of qualitative data collected one over-riding storyline emerged which was the ‘purpose of inquiry’ this was interpreted differently by individuals and groups according to limitations in their research methods experiences and discipline biases. Differences in outcome expectations or disciplines were also found to lead to barriers in communication. The CETL support allowed the lecturers the ability to reflect upon those biases, how others may interpret their inquiries and alternative research approaches. Key throughout these findings was a development of both an individuals teaching and research practices and an endeavour to share these practices so others may benefit.

A. Research Methods and the Purpose of Inquiry

DB (Science): It was noted by the lecturer that a key decision in their chosen research method was how the data and findings would impact upon key stakeholders. Quantitative numbers were considered as more acceptable and convincing. It was noted that key-stakeholders had already been convinced by accounts from the researcher on changes required in teaching practices. However, there was a perceived need for ‘numbers’ to convince other key stakeholders. Through a series of support sessions the lecturer developed a deeper understanding of practitioner inquiry and bias in research. There was an interesting move away, for this researcher, from an initial perspective of research as a means to justifying what they already knew. The researcher then developed an approach that allowed for further exploration and clarification of practice based issues before justification of solutions was attempted. Through understanding different approaches to practice based research and methodologies there grew a deeper reflection on their own practice and an understanding of the importance of bias in research when later seeking to embed findings.

B. Research Methods and the Purpose of Inquiry
BT, JJ, PS JE, SJ & KH (Computer Science and Science): Several computer science and science lecturers developed computer based applications that supported teaching and learning practices. However, through several support sessions a culture clash was identified between the Computer Sciences, Science and the work-based discipline of pedagogy. Many of the lecturers perceived that the development of an application to support teaching and learning practices was enough in itself. Some saw the need to evaluate their development to justify how well it supported practices. However, very few highlighted the benefits of identifying where these applications failed to support best-practice. Through careful reflection throughout the research and development process the lecturers were able to conceptualize their ownership of the product and reflect on potential biases. The benefits of clearly defining practice based benefits and limitations of the application were noted. One lecturer had identified that despite a very good interest in the application being developed that there was a poor take-up of the application for daily teaching practices. Initially the natural inclination of the researcher was to re-develop the application according to different pedagogical approaches. However, through practitioner inquiry support sessions the lecturer discussed the possibility that these application would also fail to be engaged with. It was noted, that other factors, apart from pedagogical design, maybe affecting uptake of the technology. For example, the technology may be perceived as incurring unacceptable time-based overheads for this type of practice activity. Alternatively approaches to gathering more generic teacher & student perceptions were reflected upon as a means to feed into the design and re-design of applications. All the participants reflected upon their own biases and ownership issues and how these might clash with others from different backgrounds & disciplines.

NB, CL, KA, KB, PH TJ (Psychology, Science & Molecular Science): Distinct differences were noted between projects which used a practitioner inquiry approach and those which developed materials and applications. Those involved in practitioner inquiry focused primarily on the benefit of the project for themselves and their students. As a result, the opportunity to take part in the project was often recognition enough. For those involved in product development, such as producing student support materials and software, the issue of how the product would be developed and what would happen next was of greater concern. Expectations were therefore different between the different types of project, and these needed to be mediated and communicated between the lecturers and the Centres. When this communication was not in place, there was a fear that the resultant product was not required and that ‘all the effort’ would be wasted. Where communication was constant and two-way, the aims of the project were more likely to be achieved to the satisfaction of both parties. One lecturer had developed a tool for staff development purposes, but, like the lecturer identified above, there was poor take-up of the application by colleagues. The aims of the project were renegotiated between the lecturer and the Centre, with the focus placed on investigating the reasons for lack of use and the issues involved in using technology for professional development.

CC, JJ, MC, MP, JL, JM, JB & TS (Education & Business): Over a 6 month period several projects were coordinated between the education and business faculties that required collaboration and co-ordination between these two faculties. The themes related quite strongly, however, inquiry approaches often varied between the two faculties. Several aspects of the collaboration were hampered by issues of discipline language barriers, norms of behaviour and assumptions. This meant that frequently discussions resulted in confrontations where both parties were agreeing with each other but using different language and points of reference that were alien to the other discipline. The concept of generalizing between disciplines was perceived, across both disciplines, as weakening the approach for specific departmental needs. This meant that coordination between faculties often resulted in personal agendas, departmental agendas, compromises and ultimately issues of ownership. Ultimately, the approach of coordinating separate discipline specific projects was used to retain ownership. Although these sessions are still being co-ordinated it was felt that frequent meetings to communicate and co-ordinate findings also allowed interpretation of discipline differences and generation of generic issues.
V. DISCUSSION

The practitioner inquiries detailed here were found to support continuing professional development and work-based learning in two particular ways: through developing their own and others teacher practices, and secondly, their research practices. Through completing the projects lecturers began to see links between technological developments, student support and the practice of teaching. This outcome conforms to the benefits encountered through work-based learning [14]. The lecturers both learned through inquiry into their own and others work practices and developed new approaches, techniques and applications to support themselves & others as teaching practitioners. The lecturers also developed as professionals through reflection and control of their own learning thus supporting their own CPD [9].

The interesting developments identified in this paper were in relation to the lecturers’ development within the organisation as a whole. We argue that this might be the elusive link between CPD and work-based learning. As individuals we learn and develop through work-based learning. Through CPD we develop in relation to a community and organisation. Within academia this highlights some interesting divides and changes within a lecturer’s personal development. Harland and Staniforth [10] suggest, there has been a divide between the status of traditional subject-related research and research related directly to teaching practice. Within the CETLs there has been a conscious move towards promoting the value of practice based research. Through these projects lecturers have both developed their own work-based learning as teachers and researchers whilst also being empowered as part of the institution and as a force for change within that institution.

The association between practitioner inquiry and empowerment is a long one [1,2]. McNiff and Whitehead [12] speak of action research, in particular, as a “powerful and liberating form of professional enquiry” (p. 8) which gives control to the practitioner rather than a professional researcher. Within the context of the CETLs, empowerment can therefore be seen not just as result of enabling lecturers to investigate their own practice, but also by developing them as professional educational researchers. This is seen in the results above whereby the lecturers developed self-reflective skills both in their teaching practice but also in relation to others. However, the use of practitioner inquiry as a means of professional development is questioned by Avis [1], who critiques work-based knowledge as continual improvement. Avis [1] argues that the language of empowerment with the continual reflection, sharing and improvement of practice is oppressive. The approach taken within the CETLs, however, seeks to place professional development not only as a stepping stone to excellence but also as recognition of that excellence. Support within both personal and professional development is of key importance to allow effective development of both the individual and the organisation.

VI. CONCLUSION

A key issue identified throughout the CETL findings was the relationship between CPD and work-based learning through practitioner inquiry empowerment. Practitioner inquiry empowerment highlighted the importance of expectations and communication of those expectations. Practitioner inquiry has traditionally focussed on the individual, or in some cases groups of people, investigating their own practice. As a result, such inquires are by definition small-scale with individual level outcomes. However, Brooker and Macpherson [2] stress the importance of going beyond “self-indulgent exercises” to enable the processes and outcomes of practitioner research to impact not just on those being researched, but also to provide “a learning post for others” (p. 219). Many of the lecturers were eager to take this generalising step (some saw it as the key ‘purpose of inquiry’) but encountered barriers to this. Lecturers seeking to contribute to teaching and learning beyond the CETL to an institutional level encountered bottlenecks to institutional change. Often these bottlenecks related to poor communication channels but they also highlighted lecturers inappropriate understanding of institutional needs, costs and structures as well as discipline barriers through perceived practice ownership. The barriers identified were found to be very demoralising for lecturers expecting to see institutional change from their projects. If lecturer expectations in the ‘purpose of inquiry’ are different to potential for institutional change and these have not been sufficiently communicated, then there is a risk that the empowering potential of the projects will be lost.
It is vital, therefore, that the ‘purpose of inquiry’ (i.e. the desired expectations of the projects, in terms of dissemination and uptake) are shared and agreed, and that the lecturer is supported in meeting their expectations.

VII. REFERENCES