Practitioner research as experiential learning?:The case of COLMSCT

Laura Hills, Steve Swithenby

Centre for Open Learning in Mathematics, Science, Computing and Technology, Open University,
l.a.hills@open.ac.uk

Abstract

Practitioner research is now long established as a means of professional development for academics in higher education, resulting in well documented benefits for the practitioner researcher and their students. What is less well documented is the process by which individual academic members of staff develop as practitioner researchers and how their engagement with the realities of practice and research influences their learning. This paper is a case study of professional development through practitioner research at the Centre for Open Learning in Mathematics, Science, Computing and Technology (COLMSCT) at the Open University, UK. COLMSCT was established in 2005 to reward teaching excellence and to fund practitioner research into develop 'effective and engaging' ways of using new technologies to support students at a distance. A total of 63 two-year projects have been supported through COLMSCT, involving both full-time academics and part-time distance tutors. The effects of the practitioner research projects have been evidenced at the level of student experience, personal transformation, colleagues, the institution and the wider higher education sector and include: changes in individual practice, increased involvement in research, modifications to assessment at module and programme level, and conference presentations and journal publications. The paper uses the theory of experiential learning, and in particular Kolb's learning cycle, to explore the process of professional development through practitioner research. Kolb's phases of learning, namely concrete experience, reflective observation, abstract conceptualization and active experimentation, are used as a lens through which to examine the process and effects of practitioner research on the individual, their students and the wider institutional and higher education context. The paper provides examples of how the processes and effects of practitioner research, such as observing practice, engagement with theoretical approaches and implementing change, relate to these phases of learning. It also demonstrates that when these phases interact, so when practitioner researchers bring abstract concepts or theoretical insights into their observations of practice, transformation, or learning, occurs. It examines the factors which influence this learning and concludes that the professional development opportunities provided by practitioner research are, in part, determined by the role that the individual practitioner researcher occupies in the 'outside world' of practice.

Keywords

Practitioner research; professional development; experiential learning; higher education

Introduction

Practitioner research has, in recent years, been increasingly accepted and even promoted as a means by which academics in higher education (HE) can research and improve their own practice, ideally for the benefit of their students (Brew, 2006; Greenbank, 2007, Warhurst, 2006). Research by practitioners is not new and includes a number of related terms such as action research (Kember, 2002), action learning (Warhurst, 2006), scholarship of teaching (and learning) (Boyer, 1990) and pedagogic action research (Norton, 2009). The term practitioner research, however, has been used here because it makes clear that it is the practitioners who are themselves engaged in the research and that the focus of that research is 'related to their everyday professional life and directly concerns their context or environment' (Campbell et al, 2004, p. 80).

The rise of practitioner research in HE has directly mirrored the increasing value placed on professional development which is embedded in the practice of the individual. In light of the rejection of the 'centralised' and 'standardised' provision of old (Warhurst, 2006, p. 113), practitioner research also offers a means to professional development which places control, to a major degree, in the hands of those who might traditionally be seen as the recipients of that provision. As Kember (2002, p. 84) states, "empowering participants to take responsibility for monitoring the quality of their own teaching is seen as a key outcome".

At the same time, concerns have been expressed about the lack of theoretical underpinning to some practitioner research (Roxå and Mårtensson 2008). Such concerns reflect what is seen as the growing requirement of teaching itself to become a "theory-driven endeavour" (Brew, 2006, p. 103). In response, current definitions of practitioner research place equal emphasis on the theoretical and practical outcomes of this research:

> The fundamental purpose of pedagogical action research is to systematically investigate one's own teaching/learning facilitation practice, with the dual aim of improving that practice and contributing to theoretical knowledge in order to benefit student learning (Norton, 2009, p. 59).

The outcomes of practitioner research for the individual and for their students, are, as indicated above, well documented. There appear to be far fewer accounts, however, as to what constitutes theoretical knowledge and how those involved reach a stage where they can contribute to it. Norton's definition raises a number of issues, therefore, about the process as well as the outcomes of practitioner research. In particular:

What learning occurs when practitioners engage with practitioner research?

What processes are involved in this learning?

What are the outcomes, both in terms of the individual and their practice, which demonstrate that this learning has occurred?

This paper attempts to address these issues by using the theory of experiential learning to explore the process and outcomes of practitioner research undertaken within the Centre for Open Learning in Mathematics, Science, Computing and Technology (COLMSCT) at the Open University UK.

Practitioner research and experiential learning

Kolb's theory of experiential learning (Kolb, 1984) is well documented in the literature on work-based learning (Smith et al, 2007) and as a model of professional development in higher education (Stefani and Elton; 2002) and teacher education (Harrison et al, 2005). Within practitioner research, however, the dominant model of learning is that of action research, with which experiential learning shares the same roots of linking education, work and personal development. As a result, there appears, with one exception (McMahon, 1999), to be very limited exploration of the relationship between experiential learning and research undertaken by practitioners into their own practice. It is our contention, however, that the phases of learning identified in experiential learning provide a useful lens through which to explore the processes and outcomes of practitioner research.

Weil and McGill (1989) identify three principal characteristics of experiential learning:

> 1. The involvement of each individual student in his or her own learning
> 2. The correspondence of the learning activity to the world outside the classroom or educational institution
> 3. Learner control over the learning experience (Weil and McGill, 1989, p. 8).

These characteristics bear a striking resemblance to the nature of much of the practitioner research currently being undertaken within higher education institutions. Firstly, the practitioner researcher becomes an active participant in shaping his or own development, rather than a recipient of the professional development provision of others. Secondly, the activity undertaken through practitioner research is directly related to the realities of teaching and learning. In this case, of course, the 'world outside' is also the classroom or educational institution. Thirdly, the practitioner researcher is able to take control of the process as well as the focus of learning. This similarity of characteristics is, however, not enough in itself to justify the use of experiential learning as a 'lens' on practitioner research. It is necessary, therefore, to examine Kolb's experiential learning cycle.

Kolb's central tenet is that experience can only become learning when the individual engages with that experience through action or reflection (Kreber, 2001, p. 219). Kolb's model of experiential learning (Fig. 1)

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878

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identifies four phases of learning: Concrete experience, reflective observation, abstract conceptualization and active experimentation. Action (prehension) can mean either concrete experience, such as observing teacher-student interaction, or abstract conceptualization, such as the concept of power. Reflection (transformation) involves either reflective observation, such as reflecting on the effects of particular ways of behaviour, or active experimentation, so, for example role playing different types of interaction between teacher and students.
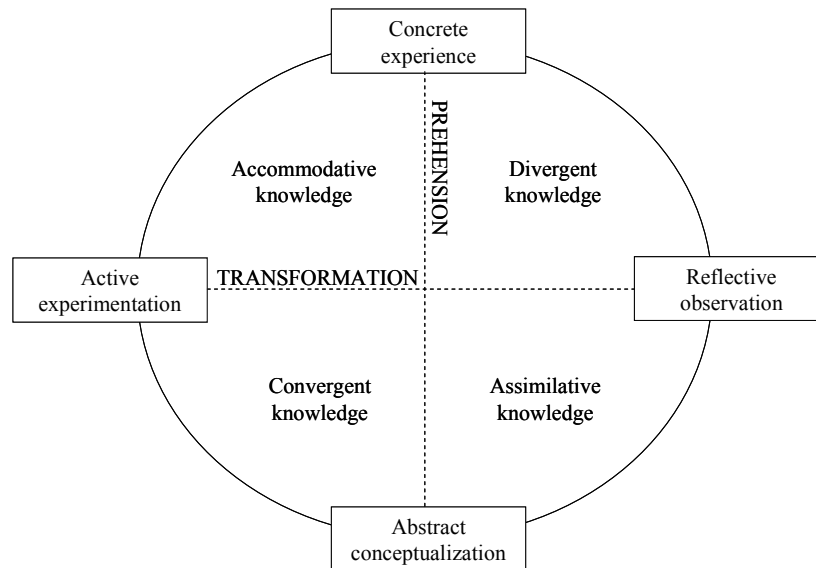

Fig 1. Kolb's experiential learning cycle, adapted from Friedman et al, 2002.

The cyclical appearance of Kolb's model is perhaps misleading in giving an impression of a smooth transition between each phase of the learning cycle. Indeed, learning can occur through the interaction between different phases of learning, such transforming a concrete experience though both reflection and experimentation, resulting in Kolb's learning styles (divergent, assimilative, accommodative and convergent). However, Kolb's model is intended primarily as an 'ideal type' (Friedman et al, 2002, p. 368) and it is by going through each phase of the cycle and addressing these two dimensions that "the most meaningful learning and development towards a fully integrated personality occurs" (Kreber, 2001, p. 220).

The experiential learning cycle is particularly pertinent to the process of professional development through practitioner research because it makes explicit that engagement with abstract concepts or theories is part of the learning process. This is important if practitioner researchers are to be provided with the tools to establish new links between "what they know and what they do" (Norton, 2009, p. 67). In the context of this particular study, the use of experiential learning to evaluate continuing professional development provision (Friedman et al, 2002) is also highly relevant. As such, experiential learning provides a framework for exploring both the process and the outcomes of practitioner research.

Practitioner research at the Open University

COLMSCT was established in 2005 to reward teaching excellence and fund practitioner research to develop effective and engaging ways of using new technologies to support students at a distance. It is one of seventy-four Centres for Excellence in Teaching and Learning (CETLs), part of an initiative in England and Wales to promote research into teaching and learning.

Each CETL is allowed to use the funding in its own way. The approach taken in COLMSCT has been to fund 63 two-year projects by both full-time academics and part-time distance tutors. All academics and distance tutors within the fields of Mathematics, Science, Computing and Technology were invited to submit a proposal to complete a project on a topic of their choice but within pre-defined areas of relevance to the future development of teaching and learning at the University. These were: Assessment and e-assessment, Online communities and

identities, Mathematics Online and Online experimentation and investigation. A number of criteria were taken into account in the selection of projects to be funded. Firstly, it had to relate to an identified issue in teaching and learning; secondly, the proposal had to be reasonably sound in terms of its practicality and methodological approach; and, thirdly, prospective COLMSCT practitioner researchers were required to demonstrate an excellent track record in supporting student learning. In total, 63 projects were funded in three cohorts: from 2005-2007, 2006-2008 and 2007-2009. Of these projects, 31 were by full-time academics, termed Fellows, and 32 were by distance tutors, termed Associate Fellows. For simplicity's sake, unless otherwise indicated, Fellows will be used to indicate both groups.

All projects were of two years duration but, reflecting the different roles of academics and distance tutors, those undertaken by Fellows were of a larger scale than those undertaken by Associate Fellows. Projects included:
- Assessing clinical decision-making skills using a web-based interactive tool
- Alternative approaches to online activities for prisoners and others without access to the Internet
- Developing e-tutorial and online communication methods, tools and techniques for subjects that are equation-rich and diagram-rich
- An investigation of the use of mobile technologies to support students' learning.

Drawing on previous experience of supporting practitioner-led projects at the Open University, and in line with other similar initiatives (Gray et al, 2007; Kember, 2002), action research was chosen as an appropriate approach as it did not presume prior educational research experience. Furthermore, the action research cycle of planning, acting, observing and reflecting provided Fellows with a logical method to conducting research of this kind. Fellows from each cohort were introduced to the basic tenets of action research at an initial induction day and were encouraged, although not obliged, to follow the action research cycle. On-going help was provided by two educational developers in the form of one-to-one support and through workshops on topics such as research planning, engaging with the literature, choosing an appropriate methodology, data collection and analysis, conference presentations and journal submission. Special Interest Groups (SIGs) were also set up to provide peer support and each new Fellow was mentored by an existing Fellow from the same SIG.

Method

The approach taken within this study was two-fold: firstly, to gain an understanding of the impact or effect of practitioner research, and secondly to apply Kolb's experiential learning cycle to these outcomes. The first step in this process was to develop a schema, or 'spheres of effect', which attempted to account for the different ways in which the practitioner research undertaken by COLMSCT Fellows and Associate Fellows might be perceived to be having an impact on practice. This involved a number of data sources, including COLMSCT formal evaluations and external reports, the scholarly output and reports of individual Fellows, interviews with a sample of Fellows and the field notes of the COLMSCT educational developers, as well as making reference to literature within the field. Each data source was scrutinized in order to identify what the effect of the practitioner research was, such as changes to feedback to students, and whether this effect could be seen at level of the individual student, the tutor group or the module. As the schema took shape, Fellows were invited to provide their own evidence of effect, which in turn led to further development of the schema. After further iteration, the following headline spheres of effect were identified: student experience, personal transformation, colleagues, the institution and the wider HE sector. Within each headline, a 'sub-sphere' was also identified, so, taking the example of the student experience, the spheres of effect were as follows: Benefit to students in individual tutor groups, modules and programmes, changes to teaching and assessment strategy in modules and programmes and identification of new ways of supporting students within specific subject areas. Particular examples of effect, such as changes to feedback to students, were then associated with each of these spheres so that a picture could be obtained of the effect of not just individual projects but also the COLMSCT initiative as a whole.

The second step was to identify how the spheres of effect of individual practitioner research projects might relate to Kolb's experiential learning cycle. Interviews with practitioner researchers and the field notes of the educational developers were also further examined to provide evidence of the process of the practitioner research undertaken. Since the purpose of this study was exploratory, strict evaluation criteria, such as those used by Friedman et al (2002) in their study of online CPD materials, was not felt appropriate. As a result, loose evaluation criteria were used, based on each phase of the experiential learning cycle.

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880

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Findings: the outcomes of practitioner research

The findings are drawn from the first two cohorts of practitioner research projects, of which there are 35. In accordance with the method highlighted above, the outcomes of the practitioner research projects are presented here in relation to each of the spheres of effect. The relationship to Kolb's cycle will then be discussed.

Student experience

Improving the student experience was key to the purpose of COLMSCT and so it is not surprising that the majority of Fellows identified benefits for their students. The extent of these benefits depended very much on the nature of the project and the role of the individual undertaking that project. The small-scale projects undertaken with their own tutor groups by many Associate Fellows meant that any benefits to students were, at least in the short term, restricted to those tutor groups. As one Associate Fellow states:

> My project had an impact on the students who took part in the study, and from the responses to the questionnaire I believe this was mostly in a positive manner. There is potential for this work to have an impact on students in the future, if similar formative assessment of skills is introduced more widely (COLMSCT Associate Fellow).

Where projects were focussed more broadly on module design or mechanisms of student support, so on the focus or mode of teaching and not just the specific act of teaching, benefits to students were likely to be more widely felt:

> The enhanced feedback practice being adopted by tutors … in my project should be of direct benefit to students. … This is because it is designed to provide more of what students say they find useful and less of what they say they don't understand (COLMSCT Fellow).

Personal transformation

Personal transformation was taken to mean a change in individual practice and the achievement or identification of personal professional development goals. At the level of the individual, changes to teaching practice were identified by many as an outcome of their projects. Unlike more traditional action research, where the focus is very much on individual practice, COLMSCT projects often focussed on teaching and student support at module or even programme level. As such, identification of the need for change by the individual could, if that person had sufficient authority, imply major changes to teaching strategy:

> This research has provided much valuable information on student perceptions of the [module] resources DVD, on the [module] content and how we deliver the material. … However, the most significant changes should be made to the assessment process (COLMSCT Fellow).

Involvement in research was key to the way many Fellows felt that their personal professional development goals had been met. This was evidenced in three ways. Firstly, COLMSCT had provided an opportunity to become a researcher. It afforded time and space to "stand aside from regular teaching and administrative duties in order to find out more about one facet of the teaching and learning process with a view to enhancing it". For some, the effect was about the status afforded by being involved in research: "I felt that my colleagues might now see me as research active and on an equal footing to other academics". These effects were more acutely felt by those COLMSCT Fellows who were full-time academics and for whom the burden of a heavy teaching load meant there could be limited opportunities to undertake research. Secondly, doing research also brought with it improved skills of how to conduct research, and also presentation and publication skills. Thirdly, it introduced people to new areas of research and scholarship:

> I have used qualitative research methods for the first time and presented papers at conferences outside the narrow confines of my discipline. I have also studied educational theory; in particular the application of problem-based learning (PBL) in engineering and ways of promoting deep learning across different disciplines (COLMSCT Associate Fellow).

The same Associate Fellow was one of amongst four who have now registered for the Open University's Masters in Online and Distance Education. Another Associate Fellow is using her COLMSCT research as a basis for a PhD and a further two Fellows intend to register for a PhD.

Colleagues

At some level, most Fellows shared their research or disseminated findings with colleagues. Evidence from the first two cohorts of COLMSCT indicates that Fellows gave 65 internal presentations and workshops. The audience for these events could be departmental or faculty colleagues or distance tutors and the format ranged from informal briefings to large staff development workshops In addition, a yearly Open University CETL conference was organized at which the majority of Fellows presented. Perhaps one of the key findings, however, was that the role of the Fellows was pivotal in determining the extent to which projects could influence colleagues. For Fellows who were academics, the ability to influence practice beyond the individual tutor group was vital in getting the findings of their research accepted. One highlighted the 'good working relations' she has with fellow academics on a specific module as the reason why her recommendations were implemented.

Institution and the wider HE

The relationship between practitioner research and the institution is a difficult one. Norton identifies one of the drawbacks of standard models of action research, that those engaged in it "only have powers of intervention and control of the system they are studying" (Norton, 2009, p. 58). This was particularly the case for Associate Fellows but this view is also supported by the experience of this Fellow:

> My understanding of the theory and practice of e-assessment has grown considerably during the project, as has my confidence, and this is valued within the Faculty. I wish I could make more difference in the wider University (COLMSCT Fellow).

There was recognition, however, that the status offered to the individual by being part of COLMSCT could itself play a role in influencing practice beyond the immediate system of study. As a result, a number of projects did have an impact at the institutional level. Notable amongst these was work on offender learners, which led to changes in how offender learners are supported at the Open University and the combined projects on interactive computer marked assessment initiatives, which have broadened the use of online methods of formative and summative assessment. The effect on the wider HE sector was principally in the form of publications, of which there were 49 international conference papers and six journal publications from the first two cohorts of Fellows.

Discussion: Relating outcomes to learning

This is an exploration of how the outcomes and effects of practitioner research projects relate to Kolb's experiential learning cycle. It also discusses issues which have arisen in relation to those effects and what the implications are for the learning experience of the individual practitioner researcher.

Concrete experience

As indicated above, for practitioner researchers within HE, the 'world outside the classroom' is the classroom. For COLMSCT Fellows, therefore, the concrete experience of teaching was both the learning activity and the starting point for that learning activity. Practitioner researchers begin with what Greenbank terms "tacit personal theories of teaching and learning" (Greenbank, 2007, p. 99). It is this which Fellows used to formulate their project and identify the element of practice to focus on, the learning activity. This starting point of concrete experience, was, however, very different for Fellows and Associate Fellows in COLMSCT. For Associate Fellows concrete experience as learners was very much entwined with the day-to-day experience of student support. For Fellows, who as Open University academics often have limited direct contact with students, concrete experience was more focussed at the level of the module and of the general student experience. This starting point also had a marked effect on how Fellows were able to engage with the processes of experiential learning and can be seen in the markedly different spheres of effect of their research, which, for the majority of Associate Fellows was mainly in the spheres of personal transformation and student experience and which for Fellows was more likely to be at the level of colleagues, the institution or the wider HE sector.

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882

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Reflective observation

In Kolb's cycle, reflective observation is the process of mental engagement. Following Postareff's notions of 'reflection in action' (Postareff, cited in Norton, 2009, p. 32), it is used here to imply the process of research into practice. By this we do not just mean using appropriate methods of research and analysis but rather, by engagement with such processes, the "transformation from previously held assumptions to adopting a new framework" (Norton, 2009, p. 23). The iterative nature of the action research cycle meant that Fellows were encouraged to constantly reflect on and review their research. That this occurred to some extent can be seen in this Associate Fellow's response:

> The preconceived idea I had has been clearly undermined by the research and I'm starting to look in a wider field at perhaps why do students employ technology and why they don't (COLMSCT Associate Fellow).

Abstract conceptualization

Norton states that "we must turn to theory if our research is to have any influence or applicability" (Norton, 2009, p. 67) and abstract conceptualization implies here engagement with theoretical and contextual knowledge. Bartlett and Burton claim that that is through increasing involvement in practitioner research, so in reflective observation, that the practitioner begins to seek out the relevant literature and becomes "increasingly involved in theory" (Bartlett and Burton, 2006, p. 402). However, it was clear that some Fellows did not initially expect such an emphasis on the "research" aspect of the COLMSCT and found the process of involvement with theory very daunting. Others recognised the need to formalize this involvement in theory in order to have 'influence and applicability':

> [I]f the results of my project work were to reach a wider audience than merely within the Open University then I would need to disseminate them through the traditional research channels – conference and journal papers – and so would need to frame the project more clearly as research (COLMSCT Fellow).

As this comment indicates, it is primarily in relation to the effect at the level of the institution and the wider HE sector that the role of theoretical knowledge was felt to be particularly important where conference presentations and particularly journal papers provided a way of evidencing some form of involvement with theory. At the personal level this was demonstrated through completion of masters or doctoral level studies. Given the external academic milieu in which the full-time central academics were working in, and the associated pressure to be research active, Fellows felt this need for involvement in theory more acutely than Associate Fellows.

Active experimentation

Henry (1989, p. 27) offers both 'Testing implications in new settings' and 'future planning' as alternative terms for the fourth stage of Kolb's cycle. These terms are particularly relevant in this context as they emphasise transformation, or learning, through engagement with theory (abstract conceptualization) and in relation to the 'concrete experience' of teaching. In the case of COLMSCT, active experimentation is taken to mean modifications to teaching and learning which arise from the research projects, and recommendations for change. In both cases, there is an implicit understanding that this is not the end of the cycle and that further research or 'experimentation' will follow as the practitioner researcher seeks to learn from and develop those changes.

As previous examples have shown, change has occurred at the level of personal transformation and student experience in particular. The difficulty within practitioner research projects is that change cannot be assumed, particularly when operating outside an individual's powers of intervention and control. For COLMSCT Associate Fellows, distanced as they are, literally and metaphorically, from the central University, active experimentation may therefore mean changes to their own teaching and recommendations to others for change.

Conclusions

This study highlights the importance that the role of the individual practitioner in the 'real world' may have on the nature of their professional development. Coming back to Weil and McGill (1989), therefore, the third characteristic of experiential learning, that learners have control over their learning, is true, to an extent. With the current focus on practitioner research as requiring 'influence and applicability', the authority of individuals to have influence beyond the system they are studying may become increasingly important. This does not mean to say, however, that the professional development of those without this control is inhibited or lessened. Evidence from COLMSCT indicates that nearly all those involved were 'transformed' personally and professionally by the experience. What it suggests is that if we are to accept practitioner research as professional development which is embedded in the practice of the individual then we need to both recognise the context of the practice and, where appropriate, to provide support to transcend the boundaries of that practice.

The title of this paper places a question mark over whether practitioner research is experiential learning. Indeed, experiential learning has been criticized for not involving an "explicit strategic attempt to improve practice" (McMahon, 1999, p. 167), something which is key to most descriptions of practitioner research. However, practitioner research has as its very starting point the 'world outside the classroom'. It is, therefore, not just the practitioner researcher but this world of practice which becomes part of the learning process. What experiential learning offers us is a way of relating the experience of the practitioner researcher with their development as researchers and as higher education practitioners. The development of the theoretical as well as practical knowledge inherent within Norton's definition of practitioner research (Norton, 2009, p. 59) is more explicitly stated within the experiential learning cycle than it is within other explanations of practitioner research, such as action research. In answer to the question posed in the title of this paper, therefore, we maintain that practitioner research is a form of experiential learning and that Kolb's cycle of experiential learning offers a way of better understanding the process of professional development through practitioner research.

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884

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