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A Productive Relationship? Testing the Connections between Professional Learning and Practitioner Research.

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ABSTRACT

This article is written in response to a recent report on a review of teacher education in Scotland undertaken by Graham Donaldson (2011). In particular it questions the recommendation that engaging teachers in professional enquiry and research-informed teaching is the way forward for developing the professional capabilities required of "21st Century teachers". The report reflects an increasing emphasis in the literature on school effectiveness and improvement of the need to further teachers' professional learning and a pedagogic pressure for them to adopt constructivist approaches to teaching that are based on research evidence about how children and young people learn best. Practitioner research is seen by policy makers as an important strategy for achieving these objectives. This article, based on a series of empirical studies, sets out to identify some of the issues revealed by the attempt to use practitioner research as a vehicle for affecting classroom practice within the context of a policy initiative to support the development of accomplished teaching. It argues that, if such a strategy is to be effective, it is important to conceive of it in systemic terms and to confront the challenges involved in developing the sets of networked relations that will be essential if such a strategy is to prove worthwhile.

INTRODUCTION

Reporting on a recent review of teacher education in Scotland, Donaldson (2011) harked back to Hoyle's (1974) notion of the teacher as an 'extended' professional, and underlined the importance of teachers maintaining a commitment to research and evidence-based practice, stating that a reliance on classroom experience as the basis for teacher development was no longer acceptable. He asserted that:

> The most successful educating systems invest in developing their teachers as reflective, accomplished and enquiring professionals who are able to teach successfully in relation to current expectations, but who have the capacity to engage fully with the complexities of education and to be key actors in shaping and leading educational change. (2011:14)

This statement represents a further, possibly significant, shift in the model of school improvement which dominated policy in the schools' sector in Scotland from the late 1980s until the early years of the new millennium.

After decades of placing a reliance on the power of detailed, centrally prescribed curricula to improve pupil outcomes we are seeing attempts in the UK, on both sides of the Scottish border, to promote the introduction a curriculum based on a different set of assumptions about both learning and the purpose of schooling derived from the discourse of lifelong learning. In Scotland, *Curriculum for Excellence* proposes teaching approaches based on personalisation, active and independent learning and the acquisition of core transferable skills (Scottish Executive, 2004). The engine for this change is seen as the professional development of teachers despite the failure of continuing professional development (CPD) initiatives in the past to achieve the kind of transformation in classroom practice that this

latest curricular reform requires (Galton et al., 1999; Huberman, 2001; Eraut, 2004; Elmore, 2005). This lack of success is often blamed upon fragmentary and transmissive forms of provision that failed to engage teachers or, on the basis of a more radical critique, failed to enable them to address the structural and cultural barriers to innovation that they faced within the context of schools (Dadds, 1994; Webster-Wright, 2009). A number of educationalists have maintained that earlier failures to establish teaching based on constructivist theory were due to the extra demands that a developmental curriculum, with its emphasis on the acquisition of abstract ideas that apply across a number of subject disciplines, placed on teachers. They believe that such a curriculum requires a much greater level of pedagogic expertise and understanding than the standard subject-based curriculum (Bernstein, 1971). Alongside the curricular pressure for a transformation in teaching practice, researchers in the field of school improvement and school effectiveness have been emphasising for a number of years that enhancing the quality of teachers' classroom practice is the key to improving student outcomes (Day, Sammons, Kington & Gu, 2006). Such observations have led to a greater concentration by policy makers (European Commission, 2007; OECD, 2005) on the need to improve conditions for teachers' career-long professional learning.

These developments have given a whole new life to practitioner, or action, research as part of a pragmatic, practice-based approach to enhancing teacher skills (Training and Development Agency, 2009; Cochran-Smith & Lytle, 2009). Systematic reviews of research evidence have lent support to the view that forms of collaborative professional enquiry can be effective in securing positive outcomes in attainment for students in schools (Cordingley et al., 2003; 2005). Practitioner research has been closely associated with what is called evidence-based practice in that it has served as a strategy for trying to ensure that teachers introduce into their classrooms practices that have been validated by research. It is now seen in some policy circles as a key to securing the kind of transformation in pedagogy that adopting a developmental, or constructivist, curriculum entails.

It was in this context of concerns with teacher quality and the need for curricular change that the Chartered Teacher (CT) initiative was introduced in Scotland in 2002. This was a scheme, targeted at established teachers, that aimed to support the development of accomplished teaching through a qualification process linked to salary enhancement. The discussion that follows is based on a series of empirical studies of the work and experiences of teachers who undertook accredited Master's programmes (CT programmes) which were designed to enable them to meet the *Standard for Chartered Teacher* (Scottish Executive, 2002; Scottish Government, 2009). These teachers were required to undertake an action research project as a compulsory work-based learning element of all CT programmes. This paper draws on the findings of three studies carried out between 2003 and 2010 which explored the impact of various aspects of the use of practitioner research by CT programme participants. These studies raised a number of important issues about its use as a basis for professional learning and the paper considers what they collectively reveal about the potential of basing professional learning on practitioner research and, more broadly, on professional enquiry.

For these purposes the term practitioner research is equated with action research and applied to the activity whereby teachers identify and explore problems in classroom practice, decide on an intervention that will improve the situation, put it into action and collect evidence to evaluate whether, and how, it has either done so or not. Professional enquiry is defined more broadly as a stance (Cochran-Smith and Lytle, 2009), both individual and collective, on the part of teachers and others. It entails a commitment to create and enhance professional knowledge and learning through a critical and empirically grounded exploration of the nature and effects of educational practice. Thus professional enquiry is taken to embrace a number of activities and processes of which practitioner research is but one example.

TEACHING, LIFELONG LEARNING AND THE SCHOOL CURRICULUM

The introduction of a developmental curriculum based upon the principles of 'lifelong learning' in Scottish schools signals the need for significant changes in teaching practice (Priestley et al in press) since constructivist assumptions about learning entail alterations in the relationships of teachers to students, to curriculum content and to pedagogy. The initial policy statement, *A Curriculum for Excellence* (CfE) (Scottish Executive, 2004), provided for the education of children and young people from 3-18 years of age which, in contrast to the previous 5-14 curriculum, privileged the acquisition of generic, transferable skills over the retention of information. It defined four capacities which pupils would develop through their engagement in active learning based on personalisation and choice. These were to become successful learners, confident individuals, responsible citizens and effective contributors to society. In the series of documents, produced by the government between 2006 and 2010 'active learning' was contrasted with 'passively' absorbing knowledge through listening to a teacher (Scottish Executive 2007). Active learning was variously interpreted (Drew & Mackie, 2011) as engaging children and young people in activities that involved:

> problem-solving, design and construction, presentation, performance, investigation and experiment;
> working collaboratively and participating in discussion and debate; and
> having to think for themselves.

It was claimed that this would prove to be both enjoyable and motivating for students. Personalisation and choice meant young people would be self-directing in their learning and acquire the skills to 'learn how to learn' hence they should be also engaged in:

> planning, assessing, and recording their own learning.

Through these activities, students would develop the various cognitive, communicative and practical skills required to achieve the four capacities. This reorientation of the curriculum implied major changes in the functions of the teacher who must relinquish her central position in the classroom; as a source of knowledge, as the most dominant speaker and as the evaluator and assessor of children's work, to allow for the greater participation of her students in these roles. In this sense the proposed changes had major implications for the teacher's professional identity and his or her mode and scope of control in relation to classroom activity. The relationships between teachers and pupils needed to alter as did those between pupil and pupil if this new curriculum was to be implemented. At a more technical level this change in roles and relations involved a substantive alteration in teachers' professional work in; planning, preparation, classroom behaviour, use of activities, resources and assessment procedures.

RELATING PROFESSIONAL LEARNING TO PRACTITIONER RESEARCH

It is important to explore why positing a strong relationship between teacher quality, professional learning and practitioner research is so appealing to policy makers. Currently there are three major grounds for supporting this premise:

Practical: the links between professional learning and action research are backed by research into teacher learning and have the face validity of focusing on practice
Theoretical/ideological: developmentalist theory underpins both constructivist approaches to teaching and learning and practitioner research, and
Political: the use of practitioner research suits a number of different institutional interests.

As professional work involves the engagement of affective, cognitive, and behavioural aspects of the teacher, all these need to be altered in the process of professional learning if there is to be a substantive change in practice. Evidence for this complex change emerges from a series of reviews conducted by Cordingley et al (2003, 2005) of research that established a link between collaborative continuing professional development and impact on students' learning. In describing the effects on teachers cited by these studies the review team identified the following 'internal' effects as associated with changes in pedagogic practice: greater confidence; enhanced feelings of self-efficacy; enthusiasm for collaborative working; the development of knowledge, understanding and skills in a curricular area; changes in beliefs; and access to suitable resources. Such reviews suggest there are four key processes that support the professional growth of experienced teachers:

> reflection on practice;
> experiential learning;
> cognitive challenge; and
> supportive social engagement.

However, concentrating on any one of these processes is insufficient to bring about a transformation of practice. Contexts for professional growth need to allow opportunities for all four processes, in the form of learning experiences, to be combined and sustained until new practice can be fully integrated as professional action. In turn, this implies that the connection between the individual and her working environment cannot be ignored. Adey et al (2004), looking at pedagogy in science classrooms, cited three key dimensions for securing changes in classroom practice that related to the 'external' environment for learning. These were: firstly, in the nature of the innovation and how convincingly it can be argued and understood as being of educational value by teachers; secondly, in qualities inherent in the provision of professional development such as its longevity and intensity, and access to coaching and reflection; and thirdly, in the nature of the environment in which the change is engendered, including levels of collegiality, the attitudes of the senior management, opportunities provided for the personal engagement of teachers and teacher turnover. In practical terms it could be argued that practitioner or action research was a 'shoe-in' for achieving these conditions and providing the bridge for knowledge created by researchers based in the universities to be adapted for use in practice in classrooms and schools.

In terms of theory and principles, there is a close connection between constructivist approaches to teaching and practitioner research. Both have their roots in pragmatism and Dewey's belief that human learning was best fostered through active enquiry and reflection on experience. These ideas were adapted by Lewin (1948) as a basis for changing social practice in groups which he called action research, a process that became extremely influential in the field of organisational development and management. He proposed that changes for the better in social action came through the collective involvement of those engaged in such action because attempts at changing individuals' practices outside their social context were ineffective. Action research, which is therefore fundamentally collaborative, is based upon a spiral of cycles consisting of: planning; taking an action to carry the group towards its agreed objective; and fact finding to evaluate the effect of this action and give the group the chance to learn from it. The learning resulting from the completion of the first cycle is then fed into the next phase of planning, making a decision about the next action step and so on. Lewin argued that the complexity of social action required that practitioners should be directly involved in the research because any improvement in practice had to be tailored to the people and the situation in which activity took place, if it was to prove viable. The parallels with pragmatic, democratic and optimistic approaches to inquiry are quite clear. This set of ideas about the social dynamics of learning and change were taken up and popularised in a series of influential texts on organisational learning, for example: by Argyris and Schön (1974); Schön (1983) and Senge (1990) who emphasised the need for an external stimulus in order to provide the necessary cognitive

spur to thinking differently if practice was to change in established groups. This created a tradition whereby university staff collaborated with people in a variety of organisational settings in development initiatives based on the use of action research, an approach that has proved particularly popular in education (McLaughlin et al., 2006; Cochran-Smith & Lytle 1993).

Practitioner research is also politically appealing since it allows for a certain congruence of interest amongst a number of key stakeholders in public education. For policy makers, particularly in the utilitarian and technicist form developed in much current literature (Groundwater-Smith & Mockler, 2005; Reeves, Redford and McQueen 2010), it provides a possible means of securing the implementation of change in a system that is notoriously conservative. It can be linked to enabling teachers to demonstrate professional standards that are being used, often alongside compulsory engagement in CPD, to establish progression in terms of teacher expertise (Ingvarson & Kleinhenz, 2006). For teachers, according to various evaluative reports and studies, practitioner research provides a set of experiences that they often find motivating and professionally worthwhile (Cochran-Smith & Lytle, 1993: Somekh, 2005). It is also aligned with hopes for establishing greater professional status linked to notions of teacher activism (Sachs, 2003) and a revival of teachers' engagement in decision-making about educational practice. For providers of teacher education, practitioner research is a means of bridging the desire of policy makers that teacher education and professional development should be practice-focused with the need to maintain a claim to academic respectability. It can be relatively easily adapted as a vehicle for assessment and accreditation (Boud & Solomon, 2001) at Master's level and its use on courses and research and development projects aligns with the growing demand for universities to demonstrate knowledge exchange and transfer in practice fields through research-led teaching and consultancy (McLaughlin et al., 2006).

However, there are a number of grounds for caution. Over time, action research has evolved into various different forms. In one form it has lost its critical and investigative focus to become development/strategic planning where decisions about what new practices are to be implemented, and why, are taken by groups who are not immediately engaged with the practice being targeted. A truncated plan, do and review cycle has been used to ensure the compliance of those who are so engaged with the intentions of their superiors in an organisational hierarchy. In another form action research has been used to quite the opposite effect as an educative strategy to create common knowledge and raise awareness amongst people in oppressed and marginalised groups in order to empower themselves in struggles for social justice (Freire, 2001; hooks, 1994). Between these two extremes there lies "swampy" ground with regard to the educational purpose and pedagogic framing of the activity.

PRACTITIONER RESEARCH IN PRACTICE

The material that follows is derived from three studies carried out between 2002 and 2010 two of which were undertaken as part of an internal evaluation of the Master's programme, Professional Enquiry in Education, at the University of Stirling whilst the third was sponsored by the General Teaching Council for Scotland (GTCS) in 2009/2010 and looked at the work of teachers across five different CT programmes.

The first of these studies was based on notes taken by tutors during group discussions with 34 teachers on the CT programme at the University of Stirling about their experiences of undertaking collaborative practitioner research in their schools in 2005. There were fourteen sets of these notes which were typed up by two tutors and circulated round both groups of students over two semesters as part of a series of tutorials based on collaborative reflection and problem-solving. The outcomes of the study were published in 2007/8 (Reeves, 2007; Drew et al. 2008). The second study built upon the first and was designed as a longitudinal case study based on the analysis of the events involving the programme tutors in the MEd activity and the texts that were created and/or used in the course of that activity from 2002-2007. This investigation adopted a way of describing educational action in spatio-temporal

terms because it was a methodology that privileged the representation of the relations, movements and connections that were created through the implementation of the programme. The outcomes of this study were published 2010/12 (Reeves, 2010, Reeves, 2011; Reeves & Drew, 2012). The third study for the General Teaching Council of Scotland investigated aspects of the impact of the implementation of the Chartered Teacher initiative at the national level by analysing the content of nineteen teachers' major project reports from five providers of CT programmes and conducting focus group discussions with their authors. Outcomes from this study were published as a report (Reeves et al., 2010) and in two articles (Reeves, Redford & McQueen, 2010; Reeves & Drew, 2012).

In general, the teachers involved in the various studies responded positively, in interviews and focus groups, to the experience of engaging in practitioner research. They identified much the same sorts of positive outcomes as those reported by others working in this field. They said that their experience of engaging in this form of professional enquiry in the context of a Master's programme had:

> Increased their capacity to pay attention to pupils' learning and therefore improved their knowledge of pupils' learning needs and their capacity to respond to these more effectively.
> Challenged their assumptions and led to the adoption of a wider teaching repertoire and better relationships with pupils.
> Given them a greater awareness of research literature and learning theory.
> Enabled them to use more rigorous forms of reflection and improved their analytical skills.
> Made them more critical in their response to the advocacy of educational ideas and teaching approaches.
> Increased their self-confidence and capacity to participate in professional discussion and debate.

They clearly valued their projects as a basis for developing their knowledge and practice as teachers although this is a finding that has to be treated with some caution (Spillane 1999) without a more direct link to evidence of classroom practice. It is against this generally positive response to engaging in practitioner research that the three issues outlined below are considered; firstly, the degree to which teachers can exercise professional initiative and leadership within schools, secondly, the extent to which professional learning requires a systemic response to the creation and use of professional knowledge and thirdly, how choices are made about the purposes of practitioner research and professional enquiry.

Exercising teacher leadership

Whilst carrying out enquiries in their own classrooms on an earlier module had been unproblematic for the first cohorts of teachers on Stirling's CT programme, the collaborative project that they were required to undertake to complete the course was not. Having to share practice and 'cross' classroom boundaries in the context of a school was a very different matter from keeping information within the confines of their own classrooms and sharing it with fellow participants in the 'safety' of a university seminar. The participating teachers and their colleagues were unused to being asked to engage in joint diagnostic reflection on evidence from their classrooms and it took a little time to establish the kind of openness and trust that allowed for the sharing of classroom experience. Working together in circumstances where they had not been given a clear task to undertake was also strange. It was difficult for both participants and their colleagues to cope with the notion of a teacher as someone who initiates change within a school (Sachs, 2003), rather than complying with an agenda passed down by management. 'Traditional' expectations about decision-making processes were hard to circumvent. Those on the programme felt that they were framed by their colleagues as quasi-leader/managers and expected to mimic a directive form of

behaviour that conformed with teachers' expectations of working groups. Participants felt that the purpose and ethos of a collaborative professional enquiry group was very different (Drew, et al. 2008:63). The experiences of these teachers, in taking practitioner enquiry beyond their own classrooms, raised a number of issues about the practicality of the implementation and sustainability of collegiate ideals (Huberman, 2001) amongst those working in a hierarchical culture.

Collaborative professional enquiry also caused problems for participants' relations with their managers. The first source of discomfort was that many managers were inclined to regard a display of activism on the part of a class teacher as surprising and, in some cases, inappropriate. Even where participants gained the verbal backing of their line manager, relatively few were given access to development time. For the majority of the participants it was the willingness of their colleagues to devote their own CPD time allowance to the projects that enabled them to go ahead (Reeves & Drew, 2012). Some line managers were extremely suspicious and wanted to keep a very tight rein on what was happening, which made it difficult for participants to apply collaborative principles in their work with colleagues.

A second source of discomfort between teachers and their managers arose from the difference in principle between the processes of action enquiry and school improvement planning. Whilst managers might agree to let participants lead an initiative that related to the school's priorities they wanted it actioned as a discrete task, not in the more open form of practitioner research where the outcomes are assumed to be uncertain. There was a degree of impatience and unease with time being taken to investigate and debate ideas. Participants felt this was attributable to the short-termism of the model of change embedded in development planning.

> There is a difference between our understanding of collaboration and the SMT's definition of collaboration. The SMT find it quite scary that teachers will come up with the content of the project and they are nervous about the whole thing because they don't feel they have control. *(Interview with CT programme participant, 2004)*

School managers, charged with responsibility for school development planning, were tied into the quality assurance system and various technologies of compliance and control used by inspectors and local authority officials including fixed timelines, tasks and targets.

There was little that prepared the teachers for the political work involved in attempting to change practice with their colleagues. The MEd students, with no formal status in the school hierarchy, were reliant on their personal credibility and skills in securing the permissions and resources they needed to act. Initiating collaborative enquiry in school required an ability to persuade and influence others and a combination of flexibility and persistence in interaction with staff at various levels within the school hierarchy. This was an unfamiliar form of practice for both the participants and their colleagues and it was therefore hard to secure a space for it to happen (Reeves & Forde, 2004). It was also evident, from discussions with participants, that would-be collaborators needed a sound understanding of the way in which their schools worked in order to successfully argue for permission to proceed. A lack of work-process knowledge (Boreham, 2002) about how decisions were made and operationalised in schools was a significant barrier to securing the means for enquiry groups to function effectively.

In terms of outcomes collaborative enquiry often did raise the 'spectre of critique' feared by line managers. A number of the participants found that working with their peers not only raised issues about their individual classroom practice but also brought up questions about practices within the school as a whole. They, and some of their collaborators, remarked on becoming both more critical and vocal in terms of school-based decision-making. Several asserted that knowledge derived from the examination of classroom experience was more highly valued by teachers raising the issue of legitimacy with regard to externally mandated demands for change.

One explanation for these findings, which were experienced by the majority of the 34 participants, was that they were the result of a conflict between two different discourses of

school improvement: a managerialist discourse centred on securing teacher compliance with centrally determined standards and priorities and a discourse of professionalism that was predicated on improving the professional knowledge and expertise of teachers so that they would be able to respond more effectively and directly to students' learning needs. Arguably, the 'boundary' problems between school managers and teachers instigating collaborative enquiries were inevitable because the two groups were working to different models of school improvement. This discursive conflict underpinned the vulnerability of classroom teachers in terms of influencing decision-making because of their positioning in a network of structures predicated on principles of bureaucratic governance.

Developing and using professional knowledge

The case study of the MEd programme at Stirling illustrated what activity theorists (Engestrom et al. 2003) identify as 'the expansion of the object' since, over the period covered by the second study, the conception of what it meant to be a Chartered Teacher, the nature of collaborative professional enquiry and what constituted an appropriate pedagogy to support it changed for members of the tutor team. Thus 'doing the CT programme' in 2007 was not what it was back in 2002. For the tutors, there was a growing awareness that practitioner research was increasingly provoking a broader public and shared form of professional enquiry and learning rather than remaining as a set of projects students did whilst the tutors acted as on-lookers and judges. At the more mundane level, collective competence within the tutor team developed over time as:

> A changed understanding of what professional enquiry meant. This led to adaptations in practice to support its use by both the teachers on the programme and by the tutors. An outcome of this changed awareness was the development of a number of new texts and procedural artefacts for use by tutors, programme participants and others;

> Greater awareness of, and skills in, dis-embedding, combining and re-embedding knowledge. This became a key element in developing professional learning with the teachers on the programme. It was accompanied by a greater commitment to communication, publishing and pedagogic research as a means of engaging with a wider audience about what was being learned as a result of engaging in practitioner research;

> Increased criticality with regard to their own practice and a move towards engaging more knowingly and openly in co-operative knowledge creation and exchange with the participating teachers and others on both practical and political grounds;

> A greater awareness of the various network constraints (for example those operating through quality assurance and disciplinary practices in publishing) within which the system operated allied to a growing understanding of the possibilities that were offered by the kind of network that was being created around the activity of running the CT programme. This led to the articulation of a more holistic approach to professional enquiry (I'Anson, Reeves & Whewell, 2008).

In a sense the CT programme at Stirling was a pedagogical hybrid in that it mixed a form of 'schooling', since the students attended classes in a university, with practice-based learning based on the discussion and sharing of experiences of practitioner research in schools. In the operation of this hybrid pedagogic relations were altered in such a way as to provoke enquiry through the opening up and mixing of different activity spaces. The teachers brought their experiences into the university for consideration and discussion with

their peers and the tutors and they also took ideas from these discussions and their reading back into their schools to trial in classrooms. The CT programme created an embryonic epistemic culture as part of knowledge in action at this site, where practice and theory were inextricably mixed. This in turn led to greater reflexivity, allowing the object (in this case: what it means to develop accomplished teaching through professional enquiry) to talk back and become an evolving and collective problematic (Knorr-Cetina, 2001). It revealed the potential for teachers and university staff to engage differently in a context where the social, political and ethical implications of changing competences (Delanty 2001) were more starkly highlighted than they were when the separation between schooling and professional practice was better preserved.

The major significance of the outcomes of this study were threefold:

> They showed that the creation and use of professional knowledge as an outcome of professional enquiry needed to be viewed as emergent and dynamic and dependent on the transmission of knowledge not in a straight line from centre to periphery but in multiple directions so that all parts of network were engaged in its on-going construction and testing through a variety of forms of professional enquiry/practitioner research.

> They demonstrated the importance of local 'internal' publication, of the dissemination of information and critical engagement with it, as part of the enquiry process across the various boundaries within the activity system i.e. that evaluation based on feedback and design based on feedforward need to be regarded as continuous processes of professional learning.

> They demonstrated the value of considering professional enquiry as interlinked activities occurring at a number of sites which contributed both to the professional learning of individuals and to that of the collective (teachers, policy makers, academics etc.) and that the interlinking of professional knowledge from the micro-level in classrooms to the macro level of the national education service and the discipline of education was critically important.

Framing practitioner research and enquiry

The third, national study, looked at the way in which the major work-based projects undertaken by aspiring chartered teachers were conceived and reported on five different CT programmes. We found that most of the advice given to teachers for carrying out their action research projects on these programmes used the convention of a research question, a related intervention and pre-post measures of various student outcomes as the basic design for their study.

There was a marked contrast between what the teachers said in the focus groups and what they wrote. This lay in the lack of attention given in the written reports to the data they said they used to guide their decisions about how to teach as they taught. Evidence about pupil learning that arose in the course of events in the classroom tended, on the basis of the evidence of this study, to be ignored or side-lined in these teachers' written accounts on the grounds that it was neither objective nor generalisable. Since it is a teacher's attention to what is said and done in class, as a product of the interactive, sequential and relational nature of educating activity that is supposed to underpin the development of her expertise (Gipps, McCallum & Hargreaves, 2000; Berliner, 2001; Ainley & Luntley, 2007 a & b; Hogan & Rabinowitz, 2009), this finding suggested that there was a need for university staff to re-think their approach to practitioner research, particularly as a strategy intended to enhance professional practice. There was also an intriguing link to the political framing of practitioner research since it was greater attention to, and understanding of, pupils as persons that our

sample of MEd participants claimed increased their empathy for underachieving pupils and their desire to address their learning needs. In a number of instances it was the ethical guidelines used by the universities, with their requirement to gain consent from pupils that, for many of the teachers, opened up negotiation and communication with their students which stimulated greater criticality of both personal behaviour and institutional practice. If practitioner research is construed as a very narrow 'testing' of what works in raising attainment and is thereby excised from the particularities of classroom life for those who participate in it then broader educational questions of policy and purpose are more likely to remain unexamined.

In the nineteen major project reports that we sampled, little attention was given to what the teachers learned about themselves and their own approach to teaching through their research projects. The reports concentrated on what had been learned about the effects of the intervention on pupils' learning outcomes. Just as the data about the process of learning tended to go unreported, so did the effects on the teacher. Since knowledge of professional practice hinges on making sense of both your own actions as a practitioner and those of your students in the course of educative activity, this omission was unhelpful. It limited the possibilities of exercising professional criticality and judgment. In considering forms of professional enquiry as a vehicle for professional learning, the centrality of the teachers' own personal professional development needs to be examined and valued (McNiff & Whitehead, 2002). The interactive evidence related to the process of teaching and learning was explicitly ruled out by various participants on a number of grounds, for example that it was too particular (non-generalisable), and/or that it was subjective because it was filtered by the teacher's perceptions in a way that was presumed not to be the case with questionnaire data. Central to the view of the research that the reports reflected was the removal of the researcher as an actor which presented a very significant distortion of the original argument for, and conception of, action research (Lewin, 1948). Finally, despite the fact that the CT Standard identified collaborative professional engagement with others as an essential characteristic of an accomplished teacher, only one of the five CT programmes included in the GTCS study required participants to undertake a collaborative intervention with their colleagues in school. Again, a basic premise of action research, that it is a collective activity, had been dropped.

As with the first study this investigation at national level illustrated how the interpretation of practitioner research was open to significant variation. In this case, the dominant discourse associated with action research used by teacher educators was apparently at odds with the research on effective professional learning and the theoretical principles that underpinned the development of the practice in the first instance (Noffke, 2009). It arguably set limits on aspirations to improve teachers' capacity for professional activism. Rather than interpreting the practice of practitioner research as collaborative, educative and emancipatory the bias seemed to be one of seeing it as some kind of individualised rehearsal of 'normal' science. This difference in interpretation had effects which reverberated through the next stages of implementation ensuring disturbances in participants' schools and classrooms in the one case and largely by-passing schools to affect participants' classrooms alone in the case of the remaining four.

CONCLUSIONS

One way of considering the studies that provided the data for this article is to see them as concerned with social action and interaction in a number of interlinked spaces. The first study centred on ideas, procedures and discussions located, in both space and time, as part of the performance of the CT programme in a university. Alongside the activity in the university there was also activity associated with the programme in participants' schools. As the teachers on the course moved back and forth between the university space and the schools they were taking things in the form of texts and actions from the university space

into their schools and, vice-versa, carrying ideas and experiences from the school spaces created by their participation on the programme back into the university space. This interchange was particularly marked during the periods when the teachers were undertaking the work-based learning modules. The second study concerns the way in which this mixing of spaces affected practice within a university space and provoked the creation of new spaces for knowledge creation and use as part of the performance of the MEd by the programme's tutors. The third study looked at some of the effects of the interaction between the university spaces created by five different CT programmes and the classroom spaces of the teachers participating on those programmes. By considering all three studies we therefore have some insight into interconnections running across a number of different organisational boundaries: between universities, schools and classrooms and also within a 'wider' set of connections to local and central government bodies, universities and publishers (Reeves, 2011; Reeves & Drew, 2012).

Looking across all three studies raises a number of issues about the use of practitioner research as a basis for professional learning.

> Firstly, that it is important to pay closer attention to what happens at the various transition points in the implementation of a professional learning strategy in order to recognise where and how ideas about practice are translated and modified as they pass from one organisational space to another in the education service. The studies described in this paper show very clearly that the linear, or transfer, model for development and improvement is grossly inadequate. Professional learning, if it occurs, necessarily modifies contexts for practice just as contexts of practice continually modify professional learning and it is their mutual adaptation that is required to secure sustainable change.

> Secondly, there is a large gap in our ability to learn how to implement a developmental curriculum in schools, because we continue to see evaluation as an activity that comes 'at the end' of an initiative. If professional enquiry is to support the professional learning needed to undertake the task of implementing *Curriculum for Excellence* then we need to take a very different approach to the use of feedback and feedforward and the role of evaluation. An approach that is more inclusive and based on a relational understanding of professional enquiry as an ongoing and critical interaction between the how (the process of learning to support professional learning), and the what, (the outcomes of that process) and the why, (making judgments as to the educational desirability or otherwise of the outcomes) in the context of our educational system. What we need is a more provisional, adaptive, and collective approach to the use of practitioner research and other elements of professional enquiry as the basis for professional learning. One that recognises from the beginning that the ends of professional enquiry and professional learning are not fully knowable, nor are our objectives with regard to them fixed. Both will change and adapt in the movement to achieve them so we need a system which is capable of continually creating, disseminating and testing knowledge across and around the network of activities that it performs.

> Thirdly, there is a need to keep an overview of the network of relations that can maintain the structures and culture that will effectively support the practice of professional enquiry. Without developing this hinterland, practitioner research - as many teachers who have undertaken it as part of a postgraduate course or a research and development project have found - is liable to end up as an isolated, one-off experience. Teachers will find it

difficult to innovate and develop their classroom practice through enquiry, and research, if school, district and national structures do not support them to do so.

Underlying all three is the need to recognise the discursive conflict between the requirement for compliance with hierarchical instruction embedded in quality assurance and the non-compliant basis of enquiry, which is based on questioning, criticality and debate. This contestation of principles and practices may be papered over by stripping action research and professional enquiry down to simple 'techniques' for professional learning but the cost in the longer term is likely to be high. It has taken nearly 30 years to build up the structures that support the Quality Initiative in Scottish schools. For professional enquiry and practitioner research to become effective as a principal strategy for improvement it will arguably require a similar level of investment and time to both dismantle those structures that are at odds with the principles and practices on which they depend and build new networks of activities that are supportive of strengthening teachers' professional knowledge and its application to practice.

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