

**Teachers and Teacher
Educators Learning
Through Inquiry:
International Perspectives**

Edited by:
Pete Boyd & Agnieszka Szplit

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*This book is dedicated to the memory
of our friend and colleague
Professor Carey Philpott*

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International Perspectives

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Editor (Smithsons Publishing Limited), The United Kingdom

Language correction: Pete Boyd

Publication financed by The Jan Kochanowski University, Kielce, Poland
(project number 613527)

Publisher: Wydawnictwo Attyka, www.attyka.net.pl

Kielce-Kraków 2017

ISBN 978-83-65644-28-2

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Teacher Educator Professional Inquiry in an Age of Accountability

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Abstract

'Teacher Educators' are teachers of teachers and may typically be based within schools or within university departments. In this chapter we argue that all teacher educators should adopt 'inquiry as stance' and should be actively engaged in ongoing professional inquiry or practitioner research. Within a team delivering initial teacher education programmes we argue that there needs to be a range of expertise but with all teacher educators active in professional inquiry. We define professional inquiry as distinct from pragmatic evaluation which is everyday quality assurance procedures. Beyond that we propose that at least some members of a teacher educator team should be engaged in ongoing classroom practice whilst others need to be engaged in practitioner research. The content of teacher education programmes needs to include critical engagement with cutting edge research evidence and with learning theory as well as enactment, experimentation and evaluation of core practices in classrooms. Teacher education, both initial and advanced, needs to equip teachers with the essential skills and knowledge of educational research literacy so that they have the professional tools required to contribute to curriculum development and develop research-informed practice. Teacher educators based in schools and universities need to model professional inquiry and practitioner research.

Key words

professional inquiry, practitioner research, pragmatic evaluation, modelling, inquiry-based learning, school-based teacher educator, university-based teacher educator

Teacher educators

An inclusive definition of teacher educator has been adopted by the European Commission (2013, p.8):

'Teacher educators are all those who actively facilitate the (formal) learning of student teachers and teachers.'

This seemingly common-sense definition is practicable but requires at least two further comments:

Firstly, the European Commission definition is helpful because it cuts through the plethora of labels applied to different professionals contributing to teacher education and professional learning activity. Experienced teachers might contribute to teacher education through a range of activities along a continuum from informal to formal, for example: informal staff-room advice, co-teaching, classroom coaching, observation of teaching with feedback, mentoring within a formal programme, classroom observation with high stakes assessment and facilitating workshop sessions for student teachers. We would probably want to distinguish between an expert teacher who has a deliberative and defined teacher educator role in supporting teacher's learning and one who has a less 'formal' role as a peer who is contributing but within the normal routines of a collaborative workplace.

Secondly, the reference to formal learning, and implicitly to informal learning, is problematic because it suggests a separation, for example, between a formal taught session for beginning teachers and their practical experiential learning in classrooms and schools. We argue that such a separation between two kinds of learning leads to a false distinction between two kinds of knowledge and that this is reinforced by the misleading but widespread metaphor of the 'theory-practice gap'. We prefer a metaphor for teacher learning as 'interplay' between the horizontal domain of teachers' situated practical wisdom and the vertical domain of public (published) knowledge (Boyd & Bloxham, 2014; Boyd, 2014; Boyd, Hymer & Lockney, 2015). The interplay metaphor acknowledges the social, situated, dynamic and contested expertise of teaching teams in particular settings and the possibility of teacher inquiry leading to knowledge creation. Interplay captures the need for critical engagement with published knowledge and the power play involved in professional learning and change in practice.

We have therefore slightly revised the European Commission definition and will use the following definition in this chapter:

'Teacher educators are all those who have a formal active role in the facilitation of professional learning by student teachers and teachers.'

This definition specifically includes teacher educators who are based in contrasting settings, especially distinguishing between school-based teacher educators and university-based teacher educators. It is important to note that there are some 'teacher educators' who are based in boundary-crossing units

or organisations so that they might not be clearly identified as school-based but neither are they clearly university-based. A key issue highlighted by these different settings is that their contexts will vary in the value they place on different kinds of knowledge and learning. Consequently, this will place different expectations on teacher educators, especially for scholarship and research activity and outputs (Boyd & Harris, 2010; White, 2014; White et al., 2015). This variation in the value placed on practical wisdom rather than public (published) knowledge is connected to the boundary and distance between the setting of the formal teacher education and the setting of the workplace learning element.

Using England as an initial example, because the position of teacher educators varies internationally, there are at least two distinctive groups of teacher educators who deserve particular mention at this point. Firstly, there are teacher educators working in further education colleges, which are educational institutions providing mainly vocational education from 14 years old to adult. These colleges offer programmes, including teacher education for the further education sector, at a range of academic levels including higher education. This means that the teacher educators in further education colleges are teaching on higher education programmes but are based outside the university. A key point is that these teacher educators are training new teachers and providing professional learning for experienced teachers within their own workplace and sector. These teacher educators based in further education colleges are therefore similar to school-based teacher educators and may be usefully distinguished as 'workplace-based teacher educators'. A second distinctive group of teacher educators in England who should be considered at this point are academic developers based in higher education institutions but providing teacher education programmes and professional development for their own academic or academic-related colleagues. Sometimes these teacher educators are based in an academic department, for example in an Education department, but they may also be based within the human resources service of a corporate university. In line with college and school-based teacher educators these academic developers may be captured by the term 'workplace-based teacher educators'. It is important to note that although the workplace setting of a teacher educator will no doubt be a significant influence, for example in terms of culture and the value placed on practical wisdom or public knowledge, there exists within the different workplace settings considerable variation in contracts, expectations for research activity and pathways for promotion. Considering the range of teacher educators internationally there is another dimension of being a teacher educator that should be included in our discussion and that is related to the curriculum subject specialism. Some teacher educators are defined by their area of specialism which may be focused on pedagogy or on an area of curriculum specialist knowledge.

For example, students following a programme for Primary school teachers might have some courses tutored by specialists in the curriculum subjects such as mathematics, languages, science, humanities, and the arts.

Our working definition of a teacher educator must be expanded to encompass these variations in position and therefore becomes:

'Teacher educators are all those who have a formal active role in the facilitation of professional learning by student teachers and teachers. They may be workplace-based or university-based. In some cases they may specialise in pedagogy or in the teaching of a specific curriculum subject.'

It is important to note that all teacher educators, based in schools, colleges or universities, have multiple professional identities. Identity may be viewed as the multiple inter-related narrative trajectories that we maintain about ourselves and that are in negotiation with our practice (Wenger, 1998). We like to think of a traditional climbing rope with our different identities represented by the strands, which may include school teacher, higher education teacher, researcher, consultant and leader. These strands intertwine and perhaps vary in their thickness over time. Some of the strands have bits of grit between caught them and these undoubtedly create tensions, but may also provoke professional learning. There is a negotiation between these identities and perhaps a kind of knowledge exchange activity going on between them.



Figure 1. The multiple professional identity trajectories of a teacher educator

Some evidence suggests that workplace-based teacher educators may try to foreground their identities as school or college teachers, rather than develop new identities as teacher educators, because this gives them credibility with their student teachers (White, 2013). In a mirror of this situation some university-based teacher educators might foreground their identity as researchers, gaining credibility as academics because of the primacy given to research work and researcher identity in the higher education sector. However, things are more

complicated than this and studies have shown that professional educators based in a university do not necessarily so easily abandon their identity as practitioners and that these decisions are influenced by high accountability workplace contexts (Boyd & Harris, 2010; Boyd & Smith, 2016).

We have identified the teacher educators in their various educational settings. Now we should briefly consider their wider context within the education system before focusing on professional inquiry.

The Age of Accountability

In England since the 1980s, and internationally, perhaps especially in the USA, education has been subjected to a wave of Neoliberal policy. The Education Reform Act in 1988 under the Thatcher government began the development of a free market, or at least a quasi-market in schooling in England: parental choice of school as a driver; a national curriculum; a high stakes inspection process; and subsequently school league tables based on text and exam results; and increasing performativity pressures on teachers. This legislation signalled the official start to the 'age of accountability' and subsequent governments in England have tended to continue and even reinforce the policy direction (Ball, 2013). Meanwhile, beyond the education system, Neoliberal social and economic policy has been associated with increasing inequality, particularly in England and the USA (Dorling, 2015). In England three political promises made during the 1980s have a particularly hollow ring: of a property-owning society - following the sale of social housing with no continuing re-investment; of a share-owning society - following the sale of publicly owned essential services such as power and water, often to overseas interests; and finally of 'trickle down' as a way to share wealth across society when in fact inequality has massively increased (Piketty, 2014). In this Neoliberal context young people are positioned as entrepreneurs, finding their way through life in an apparently meritocratic society and free market economy. An important contradiction within Neoliberalism is that in order for the 'free' market to operate effectively there is often increasing state intervention. This means that as schools in England are seemingly given increasing autonomy, for example from local government intervention and control, they may in fact be controlled financially by central government and by new forms of less publicly accountable governance such as 'Academy Chains' and 'Multi-Academy Trusts'. In this context teachers may seem to be increasingly positioned as 'technicians' who must employ an 'evidence-based' pedagogy to 'deliver' the curriculum. It is important to consider this high accountability wider context if we are to understand the potential of teacher inquiry to empower teachers and teacher educators to enable them to contribute to the development

of research-informed practice and to collective leadership of schools through curriculum development. We might expect that in the age of accountability school and college teachers may be distracted from the wider purposes of education and be led to 'teach to the test'. In a similar way we might expect that university-based teacher educators in the age of accountability will be concerned with the measures of success that affect personal standing such as student evaluative feedback and the scoring of their research outputs as well as measures of student employability and other measures affecting programme and institutional 'league tables'. The age of accountability foregrounds pragmatic evaluation in education, the everyday attempts to measure quality particularly through student evaluative feedback and basic consideration of test and examination results. We would argue that teacher educators need to move beyond this kind of evaluation and engage in professional inquiry; and some teacher educators will extend their inquiry approach to become practitioner researchers.

Teachers and teacher educators are located within a challenging policy and workplace context that we refer to as an 'age of accountability'. If we are to argue that they should be involved in 'professional inquiry' then we will need to define the concept and that is the purpose of the next section.

Professional Inquiry

What do we mean by the term professional inquiry? In education this term is applied to a wide range of investigations, most often involving at least some of the characteristics of practitioner research. However, the term professional inquiry also encompasses more pragmatic forms of evaluation, especially quality assurance procedures and forms of reflective learning, which do not demonstrate many of the characteristics of research. For example, such inquiry may include basic analysis of quantitative or qualitative data such as student grades or teacher written reports but not question the meaning or reliability of such measures and not include critical engagement with public, published knowledge including theory and research evidence.

The approach to professional inquiry by teachers has developed through different traditions and might be broadly classified into four styles:

- Pragmatic evaluation of practice – often associated with quality assurance or school development and top down management, including lesson observation, but also with some teaching team initiatives that have greater professional ownership.
- Reflective learning – often positioned as individual and everyday professional development but in some cases developed into more collaborative forms such

as action learning sets. Reflective learning for teachers was heavily influenced by the work of Donald Schön (1987).

- Lesson study – a group of teachers collaborate to plan, teach, observe and evaluate a lesson then develop it further and re-teach it. Developed from the Japanese tradition and applied in reconstructed forms in western countries to adapt to different cultural contexts.
- Action research – based on Kurt Lewin's (1946) development of action research. Shaped through early work by Stephen Corey in the USA (1953) and Lawrence Stenhouse (1975) in the UK on the teacher researcher leading curriculum development. Influenced by a wider idea of 'inquiry as stance' in pursuit of social justice and community action especially in the USA (Cochran-Smith & Lytle, 2009).

There is a wide literature on teacher inquiry and action research including practical guides for teacher researchers. In their action research guide Baumfield, Hall & Wall (2013) suggest two types of question for teacher action researchers to consider: 'what is going on?' and 'what if?' The second of their suggested questions is to allow for an intervention, a change in practice by the teacher that will be investigated in terms of impact. John Hattie proposes that a teacher should ask the question every day 'what is my impact on learning?' A more ambitious question explicitly addressing the wider purposes of education, including learning to learn, might be phrased as: what is my impact on learning and on learners? (Boyd, Hymer & Lockney, 2015).

A pragmatic evaluation, a professional inquiry or a practitioner research project may follow some or all of the following ten steps:

1. Identify a focus and develop questions (What is going on? What if?)
2. Collaborate with other stakeholders
3. Engage with public (published) knowledge
4. Develop an approach and inquiry design
5. Establish an ethical framework
6. Collect data systematically
7. Analyse data systematically
8. Disseminate findings and gain peer review
9. Take action – change practice in line with the conclusions of the inquiry
10. Review the process and identify the next cycle

In developing any kind of inquiry a teacher or teacher educator may consider the relevance and significance of each of these ten steps in relation to the

purposes of the project and the context in which they are working. Even a thorough pragmatic evaluation project would need to at least note each of these steps. In table 1. we set out these ten steps of inquiry and describe how each may be developed along a dimension from pragmatic evaluation through professional inquiry to practitioner research. This table is proposed as a practical tool for practitioners, in a wide range of educational workplace settings, with which they might review and aim to strengthen their inquiry activity.

Ten Inquiry Steps	Pragmatic evaluation	Professional inquiry	Practitioner research
1. Identify a focus and develop questions	The issue for inquiry or at least the quality assurance framework is identified top down	Even a top down issue is shaped by teachers who frame questions and come to own them	The issue may be top down but the focus and questions are developed through engagement with literature
2. Collaborate with other stakeholders	Collaboration is defined largely within formal teams and structures	Engagement by teachers is to some degree voluntary and others, especially learners, are invited	Research ethics and seeking co-construction of knowledge lead researchers towards collaboration
3. Engagement with public (published) knowledge	Some engagement with policy and professional guidance; increasingly may refer to research meta-review evidence	Critical engagement with professional guidance and research evidence	Informed by critical literature review and more likely to include a well-developed theoretical framework
4. Develop an approach and inquiry design	Quality assurance processes provide or strongly shape the approach and design for evaluation of the techniques of schooling	A critical inquiry stance begins to question purposes of education, social justice issues and/or leadership	Systematic literature review and a formal research methodology underpin the inquiry design
5. Establish an ethical framework	Workplace organisation ethics and codes dominate and may generate contrived collegiality	Professional codes and ethics, as well as a supportive workplace culture may create good levels of trust	Gaining formal ethical clearance and working to research ethics guidelines create a strong framework

Ten Inquiry Steps	Pragmatic evaluation	Professional inquiry	Practitioner research
6. Collect data systematically	Often use existing sources and methods of data collection already designed for quality assurance	Selected sampling, may include student voice. Use existing evidence of learning and data collection tools	May use secondary data and a range of data collection tools
7. Analyse data systematically	Some statistical analysis, for example of test results, but often a 'common sense' interpretation rather than critical analysis	Some use of systematic data analysis based on researcher methods	Sophisticated approach to quantitative and qualitative data analysis
8. Disseminate findings and gain peer review	Local dissemination and may be included in institutional quality assurance reports	Local and wider teacher network dissemination, seeking some level of peer review	Aiming for national / international dissemination and often peer reviewed research journal publication
9. Take action	Local action is likely and may inform practice across the organisation	Local action is likely and institutional action possible, depending on level of support from managers	Local action is likely. Wider influence needs support from managers and on publication of accessible guidance
10. Review the process and identify the next cycle	Evaluation systems are frequently revised but usually in a pragmatic way. Evaluation is usually part of a regular annual cycle	Sustained cycles of inquiry will depend on the development of a learning community and manager support	May depend on learning community, partnership with a research mentor, funding and support from managers

Table 1. Tens steps of inquiry across pragmatic evaluation, professional inquiry and practitioner research

Table 1. represents our attempt to define professional inquiry and to position it between pragmatic evaluation and practitioner research. It may be possible to strengthen an evaluation or inquiry by moving to the right on one or more of these steps. For example, if a focus for inquiry is very much top down from external inspectors and management then you might adopt strict research ethical

procedures, more akin to practitioner research, in order to balance the design to help achieve the required levels of trust and collaboration. For another example, as educational research meta-review evidence becomes more accessible (Higgins et al., 2013) then even pragmatic evaluations may be informed by this kind of public knowledge. In this way an evaluation might to some degree be shifted across to the level of professional inquiry, although it is important that members of the inquiry team have sufficient research literacy to understand the limitations of this kind of research meta-review evidence. This question of the research capacity of the teacher educators, teachers and other school leaders involved is important. One of the important differences as the approach moves from left to right in the table is that professional inquiry and practitioner research build capacity for curriculum development and collective leadership.

Having broadly defined professional inquiry, the next stage of our argument is to provide a rationale for the integration of inquiry into the work of teacher educators in different ways according to their work context in schools or other educational institutions.

Why teacher educator professional inquiry?

The complex and layered nature of teacher education might be helpfully considered as a cake such as that illustrated in Figure 2:

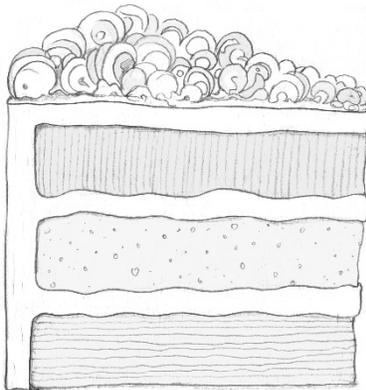


Figure 2. The layered nature of teacher education

Supporting the pupils or students, and providing for their educational needs, provides a strong foundational driver for an educational system. In the cake such

learners form the base layer because they are the main focus and their education, in its widest sense, is the fundamental purpose. However, we know that high quality teaching is a key ingredient for a successful education system. Teachers therefore form the second layer of our cake. Teacher educators make a crucial contribution to the sustainability of the education system and may be seen as the third layer of our cake. Given the significance of the professional learning and development of teachers, and the continuous policy-driven changes to teacher education worldwide, it is surprising how little attention is given to teacher educators, who put policies into practice.

The layers of our cake: teacher educator, teachers, and learners, require some connection between them and this may be represented by the icing in Figure 2. We like to emphasise ‘modelling’ as the icing that adds coherence to the layers of teacher education and gives the whole cake integrity (Boyd, 2014b). Teacher educators use modelling (by explicitly being an inquiry-based teacher themselves) and provide their student teachers with experiences of values and strategies that they might consider reconstructing in their own classrooms. Teachers use modelling (by explicitly being a self-regulating learner themselves) to demonstrate the learning power of struggle, mistakes and self-regulated learner strategies that their students may adopt.

We believe teacher educators should be modelling professional inquiry to their student-teachers, and that teachers should be modelling inquiry-based learning to their pupils. In this way teaching professionals can ‘walk-the-walk’ as well as ‘talk-the-talk’. Argyris & Schön (1974) recognised the intellectual challenge of developing interplay between public knowledge and practical wisdom. As professionals we hold an ‘espoused theory’ of action for a situation, which is what we believe is important, however, when this is compared with our ‘theory-in-use’ we may not find these theories to be congruent (White, 2011). We can choose to make some of our modelling explicit to help us to overcome this challenge. Explicit modelling is a key pedagogical approach in teacher education to facilitate the ‘interplay’ between the horizontal domain of teachers’ situated practical wisdom and the vertical domain of public (published) knowledge (Boyd, 2014b).

The texture of our cake, the fundamental characteristic running through all three layers, is learning. In this chapter we argue that you should think of this texture as inquiry-based learning. We hope you have found our little confection of some assistance in grasping our layered view on teacher education and introducing our rationale for the importance of teacher educator inquiry. The idea of texture as inquiry-based learning introduces the possibility of co-creation of knowledge, between teacher educators, teachers and students.

Co-creation of knowledge

Teacher educators need to be experts in professional inquiry and practitioner research if they are to effectively support experienced teachers in advanced professional education or professional learning. The aim of collaborative practitioner research at this level might include the co-creation of knowledge. The production of knowledge in boundary-crossing collaboration between university based teacher educator researchers and school-based expert teacher researchers aligns with 'Mode 2' knowledge (Nowotny et al., 2003). Mode 2 knowledge is socially and contextually robust knowledge whose creation is likely to involve varied stakeholders in different sites and knowledge generation occurring within a context of application. It is mutually beneficial for the stakeholders in teacher education partnerships to collaborate in inquiry leading to co-creation of knowledge (Nelson et al., 2015). Researchers may lead or convene collaborative research projects and some are repositioning themselves as invited collaborators in projects initiated by professional learning communities of teachers. In the field of technology Shneiderman argues for the creative power of such combined forms of research through collaboration between scientists, engineers and designers (2016). Dimmock (2016, p.42) asserts that 'combining tacit knowledge with research-based knowledge and theory is a compelling mix and needs to be endorsed as a principle of future professional development and practice'.

A further important reason for teacher educators to engage in professional inquiry and practitioner research is to continue to develop their own research literacy, and that of students and teachers.

Research literacy

Inquiry provides a way for teacher educators to learn new knowledge, question practices and unlearn some long-held beliefs and behaviours. 'Unlearning' is a significant part of the development of teachers and teacher educators (Cochran-Smith, 2003). There is a growing body of literature on inquiry by university-based teacher educators including self-study (Vanassche & Kelchtermans, 2015). Some studies suggest that becoming research active enhances teacher educators' research knowledge and skills but also improves the quality of the teacher education curriculum (Willemse & Boei, 2013). Mainly based on findings from small-scale in-depth studies it has been argued that practitioner research is useful 'to build general research capacity in education, to ensure thriving teacher education communities, to maintain research-informed teaching in pre- and in-service courses and to support the intellectual development of teacher educators and the teachers they teach' (Murray, 2010, p.96). Research literacy is an indication of the extent to which teachers and teacher educators are able to use a range of research methods, critically engage with the latest research

findings (including those relating to content, pedagogy and programme design) and identify the implications of this research for policy and practice (BERA-RSA, 2014). Practitioner inquiry is a powerful way to learn about the research process, providing an opportunity for teacher educators to model and teach research approaches and to publish their own findings. Teacher educators guide the development of teachers' and student-teachers' classroom practice and their research activity. This makes clear the need for teacher educators to develop research skills and a researcher identity (Roberts, 2014). There is a growing body of evidence demonstrating that when teachers adopt an 'inquiry stance', pupils' achievement can be raised (Cochran-Smith & Lytle, 2009; Timperley et al., 2007). Student-teachers may also experience an enhanced learning environment when teacher educators adopt an inquiry stance. Learning about teaching is enhanced by student-teachers researching their own practice (Korthagen, Loughran & Russell, 2006) but this requires teacher educators to understand professional inquiry sufficiently to be able to support effective student-teacher inquiry.

In OECD countries there are a growing number of teachers who are also school-based teacher educators, taking responsibility for facilitating professional development sessions for student, novice and experienced teachers within the workplace, going beyond the traditional role of a mentor, or co-operating teacher (Musset, 2010). High-quality initial teacher education is expected to support student-teachers in employing an inquiry stance towards their practice and to respond to the most recent educational research (Tatto, 2015). This is a challenge for many school-based teacher educators. A case study of a school-based teacher educator reveals how facilitating sequences of work-based learning for student teachers provides powerful learning for the teacher educator but also involves practical challenges (Boyd & Tibke, 2012). The complexity of developing appropriate pedagogy and practice for school-based teacher educators is further illustrated by van Velzen & Volman (2009) in the Netherlands. Their evidence suggested that school-based teacher educators used the tools developed by the university-based teacher educators but relied on their own professional knowledge as teachers, limiting the student-teachers ability to interpret and elaborate their experiences from a theoretical perspective. Workplace-based teacher educators have a number of professional development needs which may be partly due to being situated geographically outside of a community of research-active teacher educators (White, 2013; White 2014; White et al., 2015). This issue of professional learning and capacity building of school-based teacher educators deserves more attention from researchers and policy makers, especially given the significance of teacher education and teaching quality (European Commission, 2013). We believe that the development of scholarship through professional inquiry is just

as important for school-based teacher educators just as it is for new university-based teacher educators (Boyd & Harris, 2010; Boyd, Harris, & Murray, 2011). Being part of a collaborative community of research-active teacher educators could provide the support needed to enable teacher educators in all workplace contexts to be active researchers, engaged with the literature and able to support good quality (student) teacher inquiry.

In his classic and still useful and relevant text on curriculum development Lawrence Stenhouse presented the 'teacher researcher' and helped to initiate a long-standing, internationally important, but arguably fragmented tradition of teacher inquiry which still persists even in the age of accountability (1975). It has been noted however, that many of the teacher investigations over the years have merely evaluated the techniques of schooling rather than daring to ask tough educational questions that might uncover uncomfortable findings (Kemmis, 2006). Cochran-Smith & Lytle argue that including a social justice element within teacher inquiry, and even extending this by collaborating in the inquiry with community groups, would help teacher researchers to maintain a critical stance (2009). In addition to a social justice focus we would propose that questioning the wider purposes of education, or the organisation and management of education systems and institutions, are additional ways by which teacher inquiry might avoid being tamed or domesticated within the age of accountability.

Workplace influences on teacher educators

The challenge of developing the professional inquiry and/ or practitioner research elements of being a teacher educator vary between school and university workplaces. The expectations for levels of research activity for university-based teacher educators varies widely depending on the research aspirations of the education department (Murray & Male, 2005). Difficulties arise for teacher educators in becoming research-active when they come into a university role without sustained experience of research and publication and they may often only receive fragmented induction support towards becoming research-active. Constraints may also exist where practitioner research is not aligned with institutional priorities because of concerns that such research will not be valued by the national framework for research audit. The focus of a university department of education on teaching quality, high stakes external inspection and student evaluative feedback may create tensions so that university-based teacher educators continue to seek credibility as school teachers rather than as academics (Boyd & Harris, 2010). The induction and mentoring into research processes suitable for professional inquiry may support new teacher educators

to become research-active and assist the more effective development of an academic identity (Murray, 2010).

School-based teacher educators may also face constraints in terms of the value placed on practitioner research within their setting. They too may have a lack of sustained research experience but additionally face difficulties in accessing the expertise of a research mentor and induction into research processes especially where this is external to the institution (White, 2013; White, 2014). Another difficulty can be access to the resources needed for engagement with external public knowledge. The process of developing an academic identity may not seem realistic or be readily embraced. However, with appropriate support to become part of a community of inquiry-based practitioners it is possible to begin the process of constructing a researcher identity (Roberts, 2014; White et al., 2015). Sustained inquiry into practice, including associated experimentation and evaluation, takes dedicated time. Teacher educators, in any setting, engaged in initial teacher education programmes which are subject to intensive regulation, are likely to find carrying out research practically insurmountable in terms of the time, energy and skills required. Rather than positioning research as an individual pursuit, being part of a collaborative research project may enable teacher educators to have realistic goals for research-engagement as well as a supportive learning community to help sustain their researcher activity.

Stretching its bottom-up roots and association with participatory and even emancipatory ideals, teacher inquiry in various forms, including action research and lesson study, has been adopted as a form of professional development and 'change management' within schools as 'learning organisations'. The learning organisation may be defined as an institution in which working, learning and innovating are inter-related in a complementary way (Brown & Duguid, 1991). This element of New Public Management, the supposed adoption of private sector management practices within the public sector, has influenced the development of 'professional learning communities' in schools. A study in the UK combined survey and case study methods to identify eight characteristics of effective professional learning communities in schools including 'collaboration focused on learning' and 'reflective professional inquiry' (Bolam et al., 2005). Empirical work from the organisational literature, but with a workplace learning perspective, also offers ideas about the characteristics of 'expansive' workplace learning environments and has applied these to schools (Hodkinson & Hodkinson, 2005). There is a risk that a learning community might be appropriated by the senior management so that seemingly autonomous teacher inquiries tend to focus on instrumental knowledge valued by the organisation and apparently open dialogue does not take into account the power held by managers (Fenwick, 2001; Watson, 2014).

Despite the challenges, we argue that teacher educators need to be inquiry-based or research active wherever they are located because inquiry and research improves the quality of the teaching profession and the quality of student teachers' learning experiences. This is through research-informed content and design of teacher education programmes: being equipped to engage with and be discerning consumers of research; and having the skills to conduct individual and collaborative research to explore the impact of educational interventions and practices (BERA-RSA, 2014). The hard message is that there is not room in teacher education for those who are not engaged in professional inquiry or practitioner research.

Conclusion

The purpose of this chapter is to argue for all teacher educators to employ professional inquiry or practitioner research as part of their everyday practice and professional identity. We consider that would need to encompass variation from a small number of university-based teacher educators being professional researchers involved in large-scale projects through to the majority of university-based or school-based teacher educators adopting inquiry as a stance and being involved in good quality professional inquiry or practitioner research. We believe this is important for empowering teacher educators to contribute to the development of research-informed practice and to the collective leadership of educational practices. There is a need to go beyond personal inquiry into our own practice, to modelling, collaborating and sharing inquiry findings with the wider community of teacher educators. This needs to lead to publication of our findings more widely and to building a body of professional knowledge that informs teacher education policy and practice. In this way we can build the underpinning knowledge to give us a credible voice in this age of accountability so that, as practitioners, we can more effectively influence policy. We propose that the realistic and relevant investigation of practice by educators in their own workplaces has an essential place in the teaching profession and this applies to school teachers but also, perhaps even more importantly, to school and university based teacher educators.

There are currently some signs of hope in the wider political sphere that the dominance of Neoliberalism is beginning to break down. Within the field of education we would argue that such an opportunity requires teachers and teacher educators to adopt critical inquiry as stance. They should lead change in schools through the development of research-informed practice.

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ISBN 978-83-65644-28-2