What has the Coalition Government done for the development of initial teacher education?

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The past five years have seen significant changes to the structures and content of routes to Qualified Teacher Status (QTS) in this country, and to the balance of contributions to these routes between schools and higher education (HE). Such developments do not always address emerging knowledge about the needs of beginner teachers; further, changes have implications for teacher further professional development as well as for the health of education research in this country. However, changes have catalysed overdue evaluation of more established routes and a priori thinking about how such needs could best be met. The Carter Review (DfE, 2014b) offers some useful ways forward that should be complemented by rigorous evaluation of the range of outcomes of initial teacher education over short, medium, and long terms, making full use of the evidence base.

Keywords: initial teacher education; employment-based routes; mentor; subject knowledge; reflection; professional development

Introduction

This paper describes the initial teacher education (ITE) policy landscape in England, discussing the drivers for change under the Conservative–Liberal Democrat Coalition Government, and compares and contrasts current (2015) provision in this country with that available elsewhere. It summarizes what is known about the needs of beginner teachers and considers where, and to what extent, those might best be met. Finally, it highlights some issues and threats to high-quality ITE exposed by this discussion, suggesting ways in which policy could productively be used to improve the quality of provision.

The ITE policy landscape in England: Background

In England, schoolteachers sometimes qualify through an undergraduate route, but since the 1970s the majority have come into teaching by taking a first degree in their specialist (non-education) subject(s) followed by a one-year postgraduate course that confers Qualified Teacher Status (QTS). Such courses typically include input by both HE and schools, including substantial 'school placement' experience. Moves from HE dominance to greater partnership are longstanding, with a current requirement of a minimum of 24 weeks' experience in schools. Until recently, most such courses led to an accreditation of PGCE (Postgraduate Certificate in Education) or PGDipEd (Postgraduate Diploma in Education), incorporating both M-level academic study and QTS; that option still exists.

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Historically, some independent (non-state-funded) schools have not required QTS, and some state schools have also occasionally employed non-qualified teachers. For some years there has additionally been a small-scale facility for an entirely employment-based route to QTS, as well as for one that is largely employment-based but with some HE input – the Graduate Training Programme, with about 4,000 trainees in 2010/11 (DfE, 2015). Since 2003 the 'Teach First' programme, modelled on 'Teach for America', has also used an employment-based model to train high-quality graduates teaching in low-income areas, although those remain comparatively few – about 530 in 2010/11 and 2,000 allocated for 2015/16 (DfE, 2015); however, in 2010/11 HE-led routes accounted for about 90 per cent of 18,000 primary postgraduate teacher trainees and 82 per cent of 19,400 secondary trainees (DfE, 2015).

The 2010–15 Coalition Government therefore inherited a mixed model of initial teacher education, though it was HE-dominated. Since then they have expanded opportunities for schools to take a lead in the provision of ITE, often in partnership with HE but school-led ('School Direct'); such responsibility can vary from selection of trainees to complete control over employment-based routes ('School Direct Salaried', replacing the Graduate Training Programme). It amounts to a system with multiple providers and entry routes, and in 2015 continues to diversify further as new school-led provision develops confidence and expertise. During their five years in office the Coalition Government oversaw an expansion of existing employment-based routes, and the introduction of school-led 'School Direct' routes, which gave schools responsibility for both selection of trainees and, in the employed 'salaried' route, the overwhelming majority of their qualifying year. DfE (2015) shows that in 2015/16, allocations for school-led and Teach First routes together exceed those for HE-led routes, with allocations for 2015/16 seeing HE-led routes accounting for only 32 per cent of 21,000 primary postgraduate trainees and 38 per cent of 25,000 secondary – a change that has already had significant impact on both schools and HE, threatening to destabilize the education research infrastructure (UUK, 2014). As an 'innovative route', School Direct expanded until autumn 2014 without formal evaluation of its effectiveness, even in the short term.

Curiously, within their aspirations for a 'school-led system' (DfE, 2010), government-supported aspirations for a College of Teaching are for 'research-inspired, practice-informed and evidence-guided' practice (PTI, 2015) requiring healthy HE as at least the initial principal source of expertise in and with research. Such practice needs to draw on existing literature and theoretical frameworks as well as on context-specific evidence, and it is not clear how this is to be provided if the education research infrastructure is undermined.

How are English ITE experiences distributed between HE and schools?

Beginner teachers on English HE-led undergraduate and PGCE routes typically (Brown and McNamara, 2011) enjoy a graduated induction into the classroom, supported by in-school mentors and class teachers as well as by their HE tutor; they have frequent structured observations of their own and others' teaching; and they are supported by both school and HE mentors in analysis and evaluation of, and reflection on, classroom experience. Time in HE provides a theoretical and research-informed context and opportunity to build up reflective and practical skills and relate them to research-grounded knowledge, as well as to develop deeper subject-based and pedagogical knowledge, together with understanding and use of the research base. Further, structures of HE-led routes are research-informed, and content exposes beginner teachers to the current evidence base and emergent knowledge (BERA/RSA, 2014).

Time in school provides for supported development of the application of that knowledge, of practical skills and reflection on those skills, and some development of contextualized

small-scale and situated research skills. In each case the quality of the experience very much depends on the quality of mentoring available: at present in this country school mentors might be inexperienced in that role and in teaching, or highly experienced and knowledgeable about both; higher education mentors normally have at least a higher degree in education and usually have successful teaching experience behind them, but that might not be current (Brown and McNamara, 2011). In neither case does the mentor have to accredit their expertise for the very different task of educating beginner teachers.

Such structures and experiences continue with little change on post-2010 HE-led routes and on some School Direct non-salaried routes. However, the balance and content of initial experiences can be significantly different in employment-based and school-led routes. School-led ITE experiences can be on a continuum from those very similar to that described above, to those much more typical of current employment-based routes, in which beginner teachers are increasingly no longer supernumerary but have their own classroom and almost full teaching timetable from day one. They build up much more classroom experience, though with sometimes severely limited time and opportunities for mentoring, deep reflection, or acquisition of theoretical knowledge. Some employment-based routes have no HE input at all, and some have very little subject-specific input.

Key variables in provision would therefore seem to be: time spent in school; proportion of timetable taught when in school; time and mentor support available in school for observation (by and of trainees), development, and reflection; the extent and content of HE input, particularly in relation to the knowledge base and especially subject-specific (substantive, syntactic, and pedagogic) knowledge; and knowledge and skills in relation to the research base and teacher enquiry. This naturally results in very variable repertoires of skills and knowledge being built up: the implications for beginner teachers are discussed below. Further, as numbers entering by newer routes expand, the knowledge and expertise of the support base in schools will also change.

How does this landscape compare with that elsewhere?

Beauchamp *et al.* (2014) demonstrate an increasing divergence in the entry routes and policy discourse employed across the different education jurisdictions in the UK, which is reflected in the framework of teacher standards and competencies recently revised in each jurisdiction. Scotland, Northern Ireland, and Wales experienced different degrees of autonomy from, and influence of, the Coalition Government in education policy, with English policy nominally reflecting an ideology of school autonomy and school-led ITE (DfE, 2010). In Scotland and Northern Ireland all ITE is HE-led in a model similar to England's traditional PGCE route; in Wales HE-led routes are complemented by a small employment-based provision. These structures are paralleled by discourses in which the contribution of theoretical, research-informed, and research-active practice to ITE also varies, appearing more highly valued in Scotland and Northern Ireland than in Wales and England.

In both the developed and developing world, initial teacher education is almost universally acknowledged to require substantial HE input, combined with well-supported school-based experience (Mourshead *et al.*, 2010): the exceptions are schemes such as Teach for America, designed essentially as crisis solutions (Teach for America, 2015). It is known that initial school experience benefits from high-quality observation of and by the trainee; from high-quality time and support for deep reflection on what is seen and done in school; and from the development of deep research-informed subject and subject-pedagogical knowledge, for all trainee teachers. As they acquire experience, teachers benefit from familiarity with, and use of, the research base (Ashby *et al.*, 2008). The trend internationally is for a greater proportion of initial preparation to be spent in HE, but, crucially, for this preparation to be seen as only the start of career-long

structured development, with teachers reaching expert performance, if they ever do, only after between five and ten years of such focused development (Berliner, 2004). It is worth noting that other developed nations often do not recognize English employment-based routes as leading to QTS equivalent to their own (TeachNZ, 2015; GTCS, 2015).

What is driving ITE policy change in England?

We have seen that Coalition policy for ITE in England diverges not only from that in the rest of the UK, but also from that elsewhere in the developed and developing world. What has catalysed these changes? The White Paper on teaching (DfE, 2010) argued, *inter alia*, that the introduction of a greater variety of routes into teaching affords an opportunity to address potentially crippling shortages in some curriculum and geographical areas; the expansion of Teach First also reflects growing concern for the standards achieved by students in inner city and, more recently, other socially deprived areas (Muijs *et al.*, 2010). Government rhetoric provides an unexceptionable 'master discourse' (Ball, 1993): 'Providing the best possible training is at the heart of this government's drive to improve teaching standards and ensure children from all backgrounds have the opportunity to achieve academic excellence' (DfE, 2014a).

There is a continuing debate in England about the nature of teaching as an occupation, reflected in the Education White Paper (DfE, 2010). However, changing central conceptions about teacher professionalism in England, and with it, the requirements for initial education and development, were not the sole preserve of the Coalition Government (Beck, 2008; Storey, 2007). There has been a trend in terminology in this country, established well before 2010, away from 'initial teacher education' to 'initial teacher training' (ITT), reflecting an ideology in which teaching is seen as a craft rather than a profession, and bringing with it requirements for conceptual compliance (Lerman, 2012). The drivers for this appear to be in part a result of the 'new managerialism' (Gewirtz and Ball, 2000), with its ideology of developing power at school level, and in part a drive to bring education within the party political arena – and within that, to be seen to make an impact within political timescales.

Within this debate, it is clear that Michael Gove, Minister for Education in 2010, espoused a conception of teaching as a craft, with the appropriate induction being that of an apprentice:

> Teaching is a craft and it is best learned as an apprentice observing a master craftsman or woman. Watching others, and being rigorously observed yourself as you develop, is the best route to acquiring mastery in the classroom.
>
> (Gove, 2010)

However, he is not always consistent in his use of the word:

> Gove describes teaching as a 'craft', which should be learned in the workplace. It requires both emotional intelligence and intellectual accomplishment, he argues … 'If you look at a surgeon, the craft of surgery is allied to a real intellectual knowledge of how the body works. Teaching should be up there with surgery, where you combine the intellectual skills and the talent to produce amazing results.'
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> (*The Guardian*, 2010)

I suggest we would be less than happy if surgeons learnt the intellectual knowledge underpinning their 'craft' at the surgical table.

In addition, there is a tendency and, as above, an incentive for policymakers to use incomplete evidence:

> Equally, we do not have a strong enough focus on what is proven to be the most effective practice in teacher education and development. We know that teachers learn best from other

professionals and that an 'open classroom' culture is vital: observing teaching and being observed, having the opportunity to plan, prepare, reflect and teach with other teachers. Too little teacher training takes place on the job.

(DfE, 2010: 19)

The first statement refers to teachers' views on their most effective development as experienced teachers: such 'evidence' is neither objective nor necessarily transferable to ITE, let alone indicating ideal balances between different sources of development. Unexceptionable rhetoric about 'evidence-based policy' (DfE, 2010) is undermined when the use of that evidence is partial or biased.

Such arguments were used to justify the establishment of 'Teaching Schools' and expanding 'Academy' chains that followed the White Paper (DfE, 2010); they also support the undermining of the authority of higher education, while, crucially, failing to fully engage with the evidence base in relation to the development of teachers.

The quality of teaching received is the single most important factor in educational outcomes for young people (Barber and Mourshead, 2007) and the demands on teachers to prepare them for an increasingly complex and fast-changing world are arguably greater than ever before. In this country, education is high on the public agenda (DfE, 2010: 6), and is seen as a principal route to economic survival and prosperity, to social cohesion and individual well-being – and also as a significant investment from the public purse. Yet supply and retention of high-quality teachers in England is not yet secure, and some significant and short-term intervention measures were recently taken by the Coalition Government to address what otherwise might be crippling shortages in particular geographical and curriculum areas, via funding mechanisms to individuals and schools. Recently introduced pathways to qualified teacher status are still fluid and there is as yet little robust evaluation of some pathways, especially regarding their medium-term effects on the quality of teaching: even the most traditional of entry routes has changed significantly over the careers of teachers soon to retire, and the impact of the loss of their teaching capacity has yet to emerge.

Despite the rhetoric about 'evidence-informed policy', the literature on the needs of beginner teachers appears to have been largely ignored in these developments. However, in autumn 2014 the Coalition Government appointed an 'independent panel' led by Sir Andrew Carter to:

- define effective ITT (*sic*) practice and assess the extent to which the current system delivers effective ITT
- recommend where and how improvements could be made
- recommend ways to improve choice in the system by improving the transparency of course content and methods.

Although the 'independent' nature of the panel has been questioned, because several members have close ties with government, the report acknowledges strengths across all routes, and critiques the lack of agreed ITE curricula and expectations for in-school mentors, which are critical parts of the system. The report (DfE, 2014b) underlines the importance of classroom management, but also of subject (and subject-pedagogical) knowledge and understanding of general pedagogy and child development; of knowledge and use of the extant evidence base as well as of reflective practice situating that evidence base; of technical and principled understanding of assessment; and, importantly, of ITE as only the first stage in career-long professional development. I discuss below how these points relate to the literature on the needs of beginner teachers: it is not clear to what extent Carter drew on the wider evidence base.

The Carter panel were, of course, only able to begin to evaluate the short-term impacts of ITE routes, and considered primarily their measurable impact on student attainment

(DfE, 2014b). When considering the nature and strengths of any current routes, it should be remembered that they draw for support on the expertise of teachers trained under earlier systems. For example, in the UK in the 1970s both undergraduate and postgraduate courses typically included substantial elements of evidence-based theoretical approaches to sociology, psychology, philosophy, history, and comparative education, giving beginner teachers a repertoire of well-founded knowledge that supported later professional development and deep reflective practice (Brown and McNamara, 2011). It is not clear that such in-school expertise is being replaced by current approaches to teacher education, although arguably beginner teachers are now starting their substantive careers with more extensive classroom experience.

The apparently ideological move towards school-led (and often employment-based) ITE has, predictably, catalysed a response from HE, if a more muted response than one might expect. UUK (2014) analyses the damage caused to the financial viability of HE departments of education, with the inevitable closure of a number of courses, and the impact on both employment of academics and the national education research capacity. What it fails to do convincingly is to make a strong argument as to why that matters. Many beginner teachers value the acquisition of classroom 'survival' techniques more highly than the more academic aspects of their initial teacher education (Ashby *et al.*, 2008), and UUK (2014) makes little case for the importance of the latter. In an oblique approach to changing policy, BERA/RSA (2014) commissioned a series of papers addressing aspects of teachers' interaction with research as both users of established research and contributors to it through classroom enquiry: neither is possible without the appropriate education, although the argument that this should take place at the beginning of a teacher's career is less well developed. BERA/RSA (2014) does however make a compelling argument as to the centrality and power of research-informed structures and curriculum and evidence-led teaching in ITE. At present, the capacity for that lies predominantly with HE, although not exclusively in departments of education. It is not clear how this could be transferred entirely to schools, nor that there is a will for that to happen in institutions that are primarily focused on the education of young people rather than beginner teachers.

This raises the issue of the changing nature of partnerships between schools and HE. The expansion of school-led routes has changed the balance of power significantly: as well as introducing uncertainty from one year to the next, with HE activity within those routes dependent on schools' choices of partners, the structure and balance of HE-led teaching and assessment are susceptible to pressure from schools. Schools operate their role within ITE in a context of budgetary pressures, which can make 'cheaper' partnerships and increasing beginner teaching loads financially attractive, whatever the implications for medium-term quality of teaching, or indeed for teacher retention. Additionally, school-led roles in ITE are only as secure as the next school inspection outcome, ITE allocation, or recruitment, yet might account for significant parts of their staffing and budget. Each school-led provision is typically small-scale when compared with historical HE-led provision, so the result is a system that is still very fluid and subject to local perturbation, as well as with uncertain outcomes in terms of short-, medium-, and long-term implications for teacher quality and retention. It is far from obvious that the changes in policy are entirely driven by robust evidence of the needs of either the system as a whole or beginner teachers in particular.
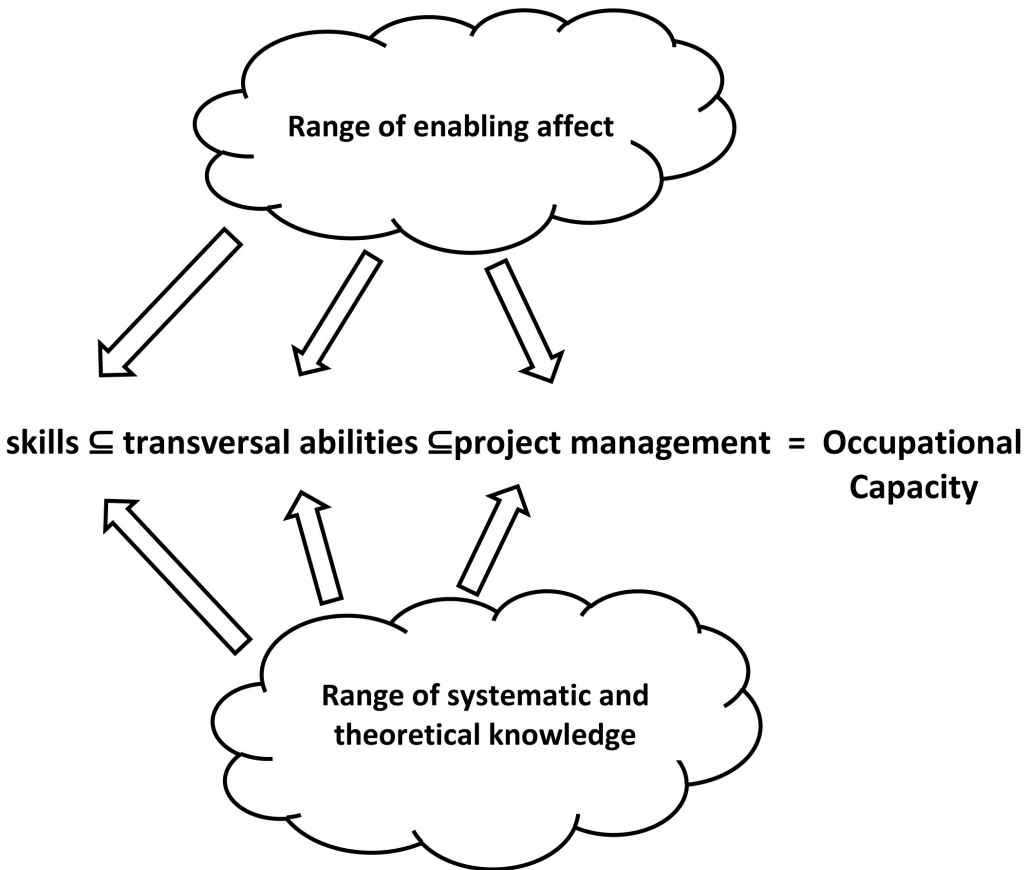
The needs of beginner teachers

So what is it that beginner teachers need? This question appears to have received surprisingly little attention, yet the issue is drawn into sharp relief by the emergence of new ITE routes offering a range of affordances and constraints. Certainly, all teachers draw on a wide range of knowledge and skills on a daily basis. The *range* of knowledge needed was characterized by Shulman (1987)

as comprising seven different types – that of general pedagogy (PK); subject-specific pedagogy (SPK); content (SK); curriculum; students; educational context; and aims, purposes, and history of education. These are widely accepted in the literature, and beginner teachers bring some elements to their initial training, but there is also a need for the development of the range of practical know-how.

Winch (2010) defines *occupational capacity* to be a set of nested 'know-how' or practical skills, underpinned by occupational knowledge – 'know-that', held as propositional, case, or strategic knowledge – and complemented by normative civic and moral dispositions. Golding (2015) shows that additionally, teachers effective in times of rapid change – which all teachers in the UK at the present time need to be – draw on a range of affective characteristics, as well as dispositions for working collaboratively, for deep reflection, and for career-long learning. Figure 1 (Golding, 2015) illustrates this expanded construct of teacher occupational capacity, together with a subset of the relationships between different components.

Figure 1: Teacher occupational capacity (Golding, 2015)

Range of enabling affect

skills ⊆ transversal abilities ⊆ project management = Occupational Capacity

Range of systematic and theoretical knowledge

(where '⬜➡' means 'feeds into' and 'range of enabling affect' includes normative civic and moral, collaborative, and learning dispositions; a positive affective network; and goal-supporting beliefs)

Additionally, Golding (2015) shows that teachers benefit from working as part of a 'professional learning community' (Hord, 1997; Harlow and Cobb, 2014) that focuses in a structured way on learning to improve students' learning, drawing on external expertise.

How these characteristics are acquired will vary between individuals, with the developmental needs of newly graduated trainees without any significant experience of classroom working differing widely from those of experienced mature entrants, perhaps coming with a variety of employment behind them, including perhaps time employed in schools in teacher-support roles (Wagner and Imanuel-Noy, 2014). Similarly, the range and scope of experiences necessary before a beginner teacher is prepared to an adequate level will vary. However, Moyles and Stuart's (2003) review suggests that these will include a range of appropriate classroom-based experience, deep and informed reflection on that experience, observations of their own and others' practice, and frequent high-quality mentoring.

How do current English ITE routes meet those needs?

There are some aspects of teaching, in particular know-how, that can be practised and analysed at a micro-level in 'laboratory' settings in HE, but that for mastery need an in-class setting within a school. Subject-specific, pedagogic, and other knowledge can be developed at scale with expert academics and peers in HE, in a setting that affords prolonged periods of learning, as can knowledge and skills for deep professional reflection, but they then need to be applied to the particular classroom setting of one's teaching, with the support of a knowledgeable and skilled mentor familiar with that setting (Brown and McNamara, 2011).

We now understand the development of tools and skills for professional reflection in, of, or for practice to be central to the development of effective teaching (Cochran-Smith and Lytle, 1999). Assumptions and beliefs can be challenged theoretically in HE, and warrants discussed in depth, but beginner teachers need to synthesize this with practical possibilities, successes, and failures – by supported analysis of and reflection on both their own in-school teaching practice and that of others. Post-hoc reflection can happen in school, with the affordances of local knowledge, or in HE, where it can be added to that of peers and related to the theoretical evidence base.

Knowledge and skills for interrogating, evaluating, and applying research can easily be built up in HE, but need to be complemented by application to one's own classroom and, in time, by testing and refining for that situation, in a cycle of intelligent and situated teacher enquiry (Tatto, 2014; Winch *et al.*, 2014). However, if teacher development were to be re-characterized, as Carter (DfE, 2014b) recommends, as a career-long process, it is not obvious that such competencies have to be deeply developed at the ITE stage; although all teachers should recognize the need for such development before they can be considered highly effective.

Some of the affordances of HE described here could be translated into school settings – provided there is sufficient time and an extensive grounded expertise, and that there is a sufficient variety and depth of colleagues to make it a rich and deeply reflective experience. Given schools' principal focus on educating 5–18-year olds rather than beginner teachers, this is unlikely to be achievable at scale, and cycling between HE and school settings in the early experience of a teacher has many benefits (Brown and McNamara, 2011).

It would appear from this discussion that the nature and balance of the partnership between schools and HE is critical, at least at present. School-led routes bring with them, for example, school-led selection of trainees, in a (usually) small-scale and time-consuming operation: clearly, a partnership with HE, experienced in such recruitment, has benefits and at present such cooperation is often sought. The boundary will always be blurred: in the UK schools are expert

in educating young people between 5 and 18, whereas HE institutions specialize in developing teachers and in educational research. However, some teachers in schools develop, through experience and perhaps deliberate study, expertise in supporting and challenging those taking their first steps in teaching, usually largely in practical classroom teaching rather than primarily theoretical understanding. Equally, most HE tutors working in ITE have a personal background of successful classroom teaching, now complemented by expertise in ITE consisting of both practical experience and academic prowess. Increasingly, as above, we have aspirations that schools should also increase their capacity for situated teacher enquiry: the nature of teaching is so complex that, for example, generic and extensive pedagogic knowledge of the best ways to develop mastery of place value will always need to be enacted in a way specific to class 5K in this school on this Tuesday morning.

What threats and opportunities does current ITE policy expose?

This discussion suggests it is not the nature of the lead in the ITE process per se that poses a direct threat to beginner teacher quality, but two features of the emerging system. Firstly, as argued in BERA/RSA (2014), the location of theoretical and research-informed expertise in structuring ITE and the harnessing of the subtleties of current – including subject-specific – research for the teaching of beginner teachers across the above range of needs, is at present largely in HE, where there is also a benefit from a scale that allows efficiencies and peer working. In principle, school-based mentors working at scale could develop much of that expertise, although it is hard to see how currency could be maintained; additionally, they need sufficient allocated time to observe and work with beginner teachers, individually and in groups with the same phase- and subject-specific development focuses. At present (2015) there seems little recognition of this challenge to the quality of the teaching force.

Secondly, current employment-based routes have developed to marginalize the availability of non-teaching time, as well as in-class expertise, and to support the development of deeply reflective skills and, particularly, knowledge, as discussed below. This is perhaps exacerbated in the case of primary trainees, who have to develop appropriate subject-specific and pedagogical knowledge, as well as know-how, across the whole curriculum. Limited national expectations of ITE curriculum and experiences, and, in particular, effective quality control of both school-based and HE-based mentors, have been thrown into relief by the existence of a variety of models. Carter (DfE, 2014b) recommends addressing both these issues, although the argument for minimum expectations for mentoring applies equally to HE-based mentors.

Further, the discussion suggests that all ITE routes from their first iteration should be subject to inspection, as well as evaluation for their short-, medium-, and long-term effects as soon as possible, if we value the quality of our teaching workforce. HE provision is subject to variation in the quality of both the academic base and provision, and the practical in-school support: too many tutors have too little expertise in one or the other, and inspections could usefully probe the impact that this has on ITE. These routes are subject to periodic inspection, which results in the demise of the weakest provision, yet many ITE staff in HE go straight from a school teaching post to an HE one without any specific education for the change in role, and their knowledge of school rapidly loses currency unless it is actively replenished: both could usefully be addressed. Equally, much within-school knowledge is idiosyncratic and situated, rather than broadly based, and typically is not deeply informed by a current, broad, and knowledgeably interrogated research base. Some school mentors have limited successful classroom experience, or interest or expertise in developing beginner teachers, perhaps being appointed because of a gap in the

timetable. This is clearly unacceptable if we value our teaching force of the future: a commitment to address Carter's (DfE, 2014b) mentoring recommendation is therefore welcome.

The principal concerns identified, though, arise from situations where trainees are employment-based in a non-supernumerary role and with a teaching timetable representing the major part of that of an experienced teacher. In the first place, that necessarily leads to a concentration on 'survival' techniques at the expense of a long-term building-up of deeply reflective practice. Secondly, it means the trainee is almost always in a classroom by themselves without the 'reflective mirror' of a mentor, and that mentoring is very much an 'add-on' to classroom experience, with short observations and limited time and support for knowledgeable development.

Such routes usually (but not always) offer a component of theoretical input, although squeezed between planning for lessons in the trainee's absence and in the knowledge there will be all manner of pieces to pick up from that. Gone are opportunities to build up practice in bite-sized chunks, with feedback at each stage, or for frequent discussion with peers in a similar situation, as the realities of classroom life are absorbed and challenged by the wider evidence base or theoretical considerations. There is a lack of time available to observe others' practice, or to reflect in depth afterwards; the nationally required second school experiences are often squeezed and bring additional psychological pressure because one's own classes are missing out in the meantime. Crucially, there is no building up of tools for further professional development through the teacher's career – which can be addressed if we recognize the need for that in an ongoing programme. Where a chain of schools or a group of schools work closely together, some of these drawbacks can be ameliorated, although the challenge of quality time and knowledgeable, relaxed, and deep (especially subject-specific) reflection with mentors and/ or peers remains under pressure, as it must always be, by preparation and marking for the next day's lessons.

Conclusion

Changes initiated by the Coalition Government have thrown into relief the affordances and constraints of existing routes and catalysed an analysis of their strengths and possible weaknesses. The Carter review (DfE, 2014b) has suggested a number of constructive ways forward – and a problematizing of teachers' relationship with research, further explored in BERA/RSA (2014). This paper goes further than either of these in arguing that there is at present complementary expertise between HE and schools that should be recognized and built on, and in particular that the role of theoretical and deeply research-informed expertise should be fully recognized. It argues further that rapid change in ITE, which has yet to be properly evaluated in terms of its short-term, let alone medium-term, effects, could have potentially devastating effects on both the sustained quality of teaching and the education research capacity of this country. An incoming minister should have the courage to complement some of the Coalition's achievements with a robust evaluation of the evidence: of what teachers need at initial (and later) stages of their careers if they are to develop into committed, effective, and fulfilled members of the profession, and the range of ways in which that can best be provided for different entrants. Only in this way will we be able to fulfil the potential of young people.

Notes on the contributor

Jennie Golding worked as a school-based mentor and ITE lead for many years, in both higher education (HE) and school-led routes. She is now based in HE: her recent research has focused on the characteristics

needed by effective teachers (their 'occupational capacity') and how they develop those characteristics. This paper draws on specific personal experiences of school and HE lenses across four English universities, and employment-based, school-led, and HE-led routes into teaching in the primary and secondary phases.

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