Teacher educators as knowledge brokers: reframing knowledge co-construction with school partners

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Teacher educators as knowledge brokers: reframing knowledge co-construction with school partners

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ABSTRACT

This paper explores the contention that teacher educators are especially well placed to help teachers bridge between practical experience and wider forms of knowledge. In its focus on issues derived from practice, knowledge co-construction and professional judgement, the paper articulates an alternative, but complementary, vision of evidence-informed practice to set alongside prevailing 'What Works' approaches. The paper uses the concept of knowledge brokering to analyse the ways that teachers collaborated with one English school of education's teacher educators in five different projects in the course of a single academic year. Drawing on data from semi-structured interviews, common brokering mechanisms are identified, yielding a set of principles for creating conditions, boundary crossing and reciprocal working which cut across subjects and age phases. Four distinctive attributes of teacher educators are proposed as part of reframing such collaborative relationships. The paper adds to debates about the need to reconfigure university-school partnerships for professional learning in order to identify more clearly the distinctive contribution of the university teacher educator, respond to the role tensions of teacher educators and support teachers' critical professionalism.

Introduction: professional learning in an age of evidence

High-quality teachers are recognised internationally as a key resource for good pupil outcomes, but teacher quality is spread unevenly, with the most disadvantaged pupils often having the least qualified staff (OECD 2018). This implies a need for high quality professional learning – the term 'learning', rather than 'development', signalling here an interest in a reflexive *process* rather than a more instrumental focus on outcomes (Boylan *et al.* 2023). In England, claims for quality and coherence are made in a prescribed three-tiered suite of frameworks spanning training, career entry and specialist qualifications. The frameworks' references to an underpinning 'golden thread of high-quality evidence' (Department for Education 2022, p. 5) also signal a policy-level aspiration for an evidence-informed profession (Coldwell *et al.* 2017). The confluence of these priorities has helped to create a culture of centralised professional learning valuing uniformity (Kennedy 2014), serving school improvement goals rather than individual interests (Steadman and Ellis 2021) and based on ideologically selective forms of evidence geared to generalisation (French *et al.* 2023). Within this context, HEI-school partnerships for teacher education are increasingly constrained by

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'authoritarian interventions' (Ellis 2023, p. 213) through policy, while teachers' work is subject to control and reduced autonomy, challenging teacher professionalism (Sachs 2016).

This paper outlines an alternative, complementary vision of evidence-informed professional learning. It is located in an English context but has resonance elsewhere, as deprofessionalisation and instrumental solutions are also seen, for example, in the US (Darling-Hammond 2020) and across Europe (Flores 2023). The learning in question centres on locally driven, collaborative, and ultimately re-professionalising school-university activity extending beyond Initial Teacher Education (ITE). While the terms 'research' and 'evidence' are frequently used interchangeably, I explore their different connotations and employ 'knowledge' as a broader, over-arching term. Using the construct of knowledge brokering, the paper draws on the voices of teachers to explore their sources of knowledge for teaching, their recent experiences of knowledge-building with teacher educators and the brokering mechanisms themselves. As a university-based teacher educator myself, I examine the contention that this role may be especially well suited to connect everyday practice with wider forms of knowledge (Furlong 2013). The focus specifically on the university teacher educator and their knowledge brokering potential beyond ITE offers a new contribution to the modelling of mutually beneficial HEI-school partnerships. The paper begins by considering more generally the role and mediation of evidence into knowledge for schools in an increasingly fragmented educational landscape.

The complexities of defining knowledge for teaching

Defining knowledge for teaching is notoriously complex and has largely resisted attempts at codification or practical prescription in any widely agreed form. Models of teacher expertise have centred on a variety of starting points, including a multi-faceted knowledge base (Shulman 1987), core practices (Grossman and Dean 2019) and judgement in the face of uncertainty (Hagger and McIntyre 2006). In recent decades, a common focus of attention in many countries has been evidence-based education. The prevalence in policy discourse of 'evidence', a term with, arguably, more positivist connotations than 'research', is a reminder of policy-makers' aspirations for education to emulate evidence-based medicine (Hammersley 1997).

Evidence in education can take many forms. For example, the BERA-RSA inquiry (BERA-RSA 2014, p. 11) offers 'a deliberately wide-ranging and inclusive definition of research', encompassing a variety of traditions and producers. Nevertheless, in recent years, research and evidence in education have coalesced at policy level around a quest for 'the very best evidence of what works' (Department for Education 2022, p. 40). This is supported by government-funded centres such as England's Education Endowment Foundation (EEF), Australia's Australian Education Research Organisation and the What Works Clearinghouse in the USA. Their existence implies an interest in generalisable effectiveness (usually seen as impact on attainment), investigated through experimental approaches such as randomised control trials (RCTs) or research summaries and meta-analyses (Wrigley 2018). The marginalisation of other research traditions in favour of quasi-experimental, policy-driven solutions is pervasive and internationally widespread (Farley-Ripple 2021, Hordern and Brooks 2023). Savage (2020), for example, notes in the Australian context the 'promise of order, certainty and progress' (p. 11) based on faith in nationally aligned policies and large-scale data.

While small-scale, qualitative education research has sometimes been justifiably criticised on the basis of relevance, cumulativeness, rigour and cost effectiveness (Oancea and Pring 2008), this 'New Science of Education' can also be questioned on a number of grounds. They include the validity of experimental findings for complex school settings (Wrigley 2018); an underestimation of research translation challenges (Farley-Ripple and Grajeda 2019); reductive, 'managerial' views of teacher professionalism which ignore rich contextual expertise (Sachs 2016) and the failure to recognise that knowledge acquisition is just one of education's purposes, alongside personal and social development (Biesta 2015).

Alongside the reframing of the evidence base for education, the last decade or so has seen another ideological shift with implications for teacher knowledge. In England, a self-improving, school-led system promises high autonomy and high accountability but also risks teachers becoming inward-looking or perpetuating weak practices (Handscomb *et al.* 2014). In this process, there has been a weakening of the connections between higher education institutions (HEIs) and schools, as school-led ITE pathways have been promoted by governments as part of a neoliberal marketplace (Cochran-Smith 2005; Furlong 2013). Schools are therefore often left to reconfigure new relationships for pre- and in-service professional learning. Whatever form this learning takes, there is a need to address the well-documented gap between research and practice. The gap has been attributed partly to a mismatch between the type of knowledge produced by researchers and that needed by teachers (McIntyre 2005), highlighting the important role of intermediaries who may offer schools mediation or 'knowledge mobilisation'.

Mediation between research and practice

Using a petrochemical analogy, Shepherd (2014) outlines an 'evidence eco-system' for English education in which knowledge producers send evidence along pipelines towards practitioners. A What Works Centre and a range of knowledge translating professional bodies 'sift through the evidence and synthesise, consolidate and pump it to those in positions to capitalise on it in accessible and usable forms' (Shepherd 2014, p. 13). Within the current English ecosystem, there are a number of organisations that might be seen as mediators or translators of this ilk. Prominent among them is the government-funded EEF, which synthesises evidence into easily accessible forms for practitioners, commissions predominantly RCT-based research and supports a network of Research Schools (Edovald and Nevill 2021). This reflects a recent shift from a patchwork of school-led provision to a range of approved providers and hub networks (Greany *et al.* 2023), representing not only bodies of knowledge but also potentially unexamined values. For example, Maths Hubs, while locally constituted, have shifted towards nationally agreed priorities. Prominent among them is the DfE's favoured 'Mastery' approach to mathematics teaching, which needs to be understood as the product of an East Asian educational context very different from England's in terms of teachers' subject specialisation, professional learning and classroom grouping practices (Blausten *et al.* 2020).

While there is potential benefit from these forms of mediation, the process risks 'moving rehearsed and ritualising tribal education discourses from research to practice without making them useful' (Rycroft-Smith 2022, p. 39). Indeed, Innes (2023) argues that the EEF and similar organisations act as Policy Intermediary Organisations or 'policy entrepreneurs', not simply increasing access to knowledge and evidence, but also influencing policy enactment within schools in specific directions. The EEF's narrowly defined form of evidence, implying standardised solutions to complex problems, he argues, may be taken by schools as the entirety of research.

From knowledge translation to knowledge brokering

Beyond this model of mediation as translation and transmission, Armstrong *et al.* (2021) identify the beneficial role of a third party to *broker* collaboration in an otherwise fragmented, competitive school landscape: a potentially more reciprocal process. Rycroft-Smith (2022) notes that 'knowledge brokering' as a term has risen to prominence only fairly recently and characterises it as:

> A type of mediation and/or boundary spanning which supports knowledge flow between research, practice and policy in a variety of ways. (Rycroft-Smith 2022, p. 7)

The concept of brokering implies in turn a form of boundary crossing, as knowledge moves between domains such as those of a researcher and an individual teacher. In the third generation of activity systems theory (Engeström 2001), attention is paid to interacting activity systems and in particular the 'polycontextuality' of experts working across more than one system

(Engeström *et al.* 1995). The idea is also taken up in Wenger's (1998) Communities of Practice, as 'multimembership' of different communities involves boundary brokering through translation, co-ordination and alignment between perspectives. While many professionals act across communities in this way, Wenger (1998) notes that some thrive on staying at the boundaries, rather than at the core of a single practice, where 'their contributions lie precisely in being neither in nor out' (p. 110).

In addition to boundary crossing, another point of commonality from these theoretical perspectives is an interest in boundary objects. For Wenger (1998, p. 107), boundary objects are 'artefacts that connect us to communities of practice to which we do not belong' and gain meaning by allowing a meeting of perspectives. For example, in the context of beginning teacher learning, such objects have included curricular materials as a source of collaborative analysis (Canipe and Gunckel 2020). For Engeström *et al.* (1995), meanwhile, boundary objects might also take less tangible forms as dialogue or a shared representation of a problem or domain. Boundary objects, then, may yield 'pedagogically productive talk' (Lefstein *et al.* 2020), which brings evidence, reasoning and multiple perspectives to bear on problems of practice in an environment of both trust and critique.

At the boundaries where brokering takes place, knowledge may therefore be *transformed* into a new, collective form: brokered knowledge has been 'de- and reassembled' (Meyer 2010, p. 123). For Rycroft-Smith (2022), this transformation is about making research more accessible through changing its language, location, structure, scale, threshold and norms. Transformation of knowledge may also lead to transformation of practice. For Akkerman and Bakker (2011), this is one of four interdependent mechanisms and may be the culmination of a process also involving *identification* of differences; *co-ordination* of collaborative practices and *reflection* arising from recognising new perspectives. The subsequent *transformation* of practice stems in part from brokers' dual vantage points, allowing them to identify new problem spaces for collaboration (Davidson and Penuel 2019). This model of multiple mechanisms is important as it draws attention to the value of the process – as well as outcomes – of brokering. Using the four mechanisms as an analytical tool, Hartmann and Decristan (2018) suggest that productive brokering activity is likely to occur in three settings: research projects in schools; network activity and professional development. Key to success, they argue, is the opportunity for co-construction of knowledge and practice not as a single-event professional development but through relationships over a sustained period of time.

Relational factors also imply an interest in local contexts. Evaluating the role of Research Schools in mediating evidence within defined localities in England, Gu *et al.* (2021) found that a key component of successful brokering activity was the local social capital held by Research School leaders, which allowed them to navigate the complex local networks effectively. In the US, Research-Practice Partnerships (RPPs) have shown the power of bringing together diverse organisations and perspectives to bring evidence to bear collaboratively on practice-driven issues emerging locally (Farley-Ripple 2021). Typically, RPPs are long-term, reciprocal collaborations with well-designed forms of interaction, aiming to gather or analyse data as a specific response to local questions (Coburn and Penuel 2016). These collaborative inquiry communities resemble Kennedy's (2014) 'transformative' professional learning activities, nurturing teacher autonomy and agency, often involving an HEI in a brokering role.

Knowledge brokering and HEI-school partnerships

Despite their clear association with evidence, HEIs face potential credibility challenges in school-facing work. For example, the position of HEIs may be undermined by a policy discourse of derision and blame towards academics (Daly 2023) and HEIs more commonly communicate and disseminate evidence at a higher level than with end-users in school (Sharples and Sheard 2015). Importantly, schools and universities are also separate knowledge communities, with different practices and traditions (Lillejord and Børte 2016), leading to the potential for misaligned expectations and communication. Nevertheless, at a local level, Day *et al.* (2021) are optimistic about new

opportunities for university and school collaboration. They argue that a move towards more collegial teacher autonomy potentially creates a new appetite in schools for collaborative activity and that an increased focus on knowledge exchange and impact in English HEI quality metrics means that there may also be more incentive on the part of HEIs to engage with this sort of work.

Both the challenges and opportunities here suggest the potential for positive impact if partnership relations between schools and HEIs are reconfigured. There is a long history of the HEI positioned as the 'expert bringer of research to the school' (McLaughlin and Black-Hawkins 2004, p. 275) but also of this external evidence being less influential for teachers than everyday experience or the wisdom of colleagues (Nelson and Campbell 2017). In response, schools and HEIs in many countries have made a number of attempts at more collaborative forms of partnership. These have included working in less hierarchical ways, positioning teachers as co-creators of knowledge and creating hybrid teacher educator roles to bring research-informed teacher judgement close to practice (Handscomb *et al.* 2014, Jones *et al.* 2016, Mutton 2023). However, Lillejord and Børte's (2016) mapping of international research on partnership involving teacher educators suggests that existing research focuses heavily on the pre-service ITE phase, rather than also addressing ongoing professional learning.

Knowledge brokering and the teacher educator

A broker, for Wenger (1998, p. 109) 'belongs at the same time to both practices and neither'. In an education context, Shavelson (2020) refers to someone bridging the subcultures of researchers and teachers: a person who would understand and live between the worlds of research and teaching, using language accessible to both in a two-way exchange. These descriptions readily call to mind the multiple identities negotiated by the university-based teacher educator (Swennen *et al.* 2010) and their position at the boundaries of academia, schools and local authorities. Certainly, teacher educators straddle a multitude of roles. Cochran-Smith (2005) lists: practitioner, researcher, policy analyst, editor, commentator, mentor, assessor, critic, debater, lobbyist, lecturer, collaborator and administrator. Although, in some countries, school-based teacher educators have become more prominent as university dominance of ITE has been disrupted (e.g. Jackson and Burch 2019), the closeness to research and wider academia arguably distinguishes the university-based teacher educator in this respect. Furlong argues that, as specialists in practical theory, university-based teacher educators are 'uniquely well placed to work with practitioners to help them form a bridge for themselves between their own practical experience and other forms of professional knowledge' (Furlong 2013, p. 186).

Nevertheless, the peculiarity of this in-between position brings with it a number of challenges. The difficulty of becoming a teacher educator with academic credibility is well-documented (Shavelson 2020, Brooks 2021). Ellis *et al.* (2014) argue that teacher educators are prevented from accumulating academic capital by the all-consuming demands of relationship management within ITE. This picture is echoed across international contexts, with an erosion over many years of the very capacity for research among teacher educators (Brooks 2021, Georgiou *et al.* 2023). To add to this, teacher educators' scholarly endeavours are devalued on two fronts. In addition to the dismissal at the policy level of small-scale practitioner inquiry in favour of large-scale methodologies for generalisability (Cochran-Smith 2005), this research is also susceptible to academic snobbery and invisibility within their HEIs themselves (Hulme *et al.* 2023). Finally, day-to-day practical constraints within schools may in any case compromise teacher educators' meaningful impact on teachers' professional practice (Ellis *et al.* 2014).

Ellis and McNicholl (2015) argue, therefore, for a transformation and reconfiguration of teacher educators' work to break the binary distinction between a small group of education researchers and the mass of teacher educators engaged largely in the kinds of 'domestic labour' best handled at school level. Exploding this polarity, they suggest, would raise the possibility of teacher educators collaborating with teachers on 'practice-developing research that also develops a theory of practice' (p. 120). For the teachers involved, this sort of collaboration might

contribute to an emphasis on critical, rather than managerial, forms of professionalism (Sachs 2016, Boylan *et al.* 2023). With both teacher and teacher educator agency in mind, I now turn to perspectives from teachers on past, ongoing and potential collaborations with one HEI to help explore teacher educators' distinctive knowledge-building contributions through the lens of knowledge brokering.

Methodology

Data collection

The empirical inquiry took the form of an embedded case study (Yin 2014), the main unit of analysis being the collaborative work between one HEI's teacher educators and local teachers in the academic year 2022–23. The sub-units were five discrete forms of school and university collaboration, as shown in Table 1 below. While each form of collaboration involved one teacher educator, the collaborations were otherwise wide-ranging in nature and the number of teachers varied from six for the oracy project to over thirty for Geography. Points of focus included curriculum development, participation in a formal research project, interest groups and lesson research. In most cases, these collaborations had developed somewhat organically, based on personal contacts and interests, rather than being coordinated centrally. Contact was occasional and time-limited for the early years project but, in other cases, regular and ongoing with at least termly meetings. It should be acknowledged that I had initiated the oracy project myself and so, although the collaboration had ended, this relationship may have influenced interview responses. Participants in the other projects had, by definition, volunteered to collaborate with the university and so may not be typical of teachers more generally.

Table 1. Five university and school projects.

Age and subject focus	Form of collaborative activity	Identifier in findings
Early Years (4–5) mathematics	Research project, involving record-keeping, reflection and interviews on the role of play in early mathematics.	EYM
Primary (5–11) oracy	Interest group meeting six times a year to observe one another's teaching and collaboratively consider how to implement new strategies.	OCY
Secondary (11–18) geography	Long-standing subject interest group focusing on a wide range of collaborative curriculum development work.	GEO
Secondary (11–18) mathematics	Lesson study group investigating mixed-attainment mathematics teaching for 11–14 through collaborative lesson research in various schools.	MTH
Secondary (11–18) English	Long-standing subject interest group and some one-to-one collaboration on curriculum development and participation.	ENG

Beginning with the oracy group on the basis of convenience and accessibility, the selection of other projects followed Stake's (1995) strategy of subsequently seeking successive examples dissimilar to the first and to each other. On this basis, projects were purposively selected to provide a mixture of school phases and diverse forms of collaboration. Potential individual participants were then introduced to me by the teacher educators involved in each project. A convenience sample was assembled, based on their availability, with two participants from each of the five projects agreeing to be interviewed. Data collection took the form of 10 individual interviews, each lasting between 40 and 60 minutes, which were subsequently transcribed for analysis. Semi-structured interviews were chosen to allow for bespoke follow-up questioning based on the various forms of collaboration experienced. The interviews sought to understand, rather than evaluate, participants' interactions with teacher educators and were based on three lines of inquiry:

(1) How do teachers usually access knowledge to inform their practice?
(2) In what ways has collaboration with a teacher educator supported teachers' professional learning?

(3) What are the mechanisms for future knowledge-building involving teacher educators and schools?

The project was approved by the university's ethics panel. Mindful of the need to preserve the trusted, sometimes long-standing, relationships between school and university colleagues, I gave particularly careful consideration to the tone of the initial approach to participants. Participants were assured of the separation between the research and the collaborative activity itself and that the underlying purpose was seeking to understand mechanisms of collaboration, rather than judging the impact of a specific project.

Analysis

In line with Yin's (2014) advice on embedded single-case studies, it was important in the analysis to return to the main case unit (the group of teacher educators and their practices). For this reason, the 10 interviews from the five projects were thematically analysed together as a body of data. The approach taken followed Miles *et al.* (2020) concurrent and inter-woven processes of data condensation, data display and drawing and verifying conclusions. On this basis, transcribed data were subject to descriptive and then pattern coding in an inductive manner in order to minimise the impact of preconceptions and mitigate bias arising from my role as both researcher and teacher educator. Thirteen themes that emerged from first cycle coding were grouped, or condensed, to form four broader categories, which were shared with tutors who had worked on each project as a form of additional validation.

(1) Current practice (features of professional development, sources of knowledge)
(2) Conditions created by working with teacher educator (legitimisation, space, networking)
(3) Teacher educator attributes (perspective, expertise, connections, understanding)
(4) Ways of working with teacher educator (shared objects, community building, participation, change orientation)

Any quotations in the findings that follow are labelled by project so that the context can be understood but, in the interests of anonymity, the two participants within each project are not separately identified.

Findings

Teachers' current practice: sourcing knowledge for teaching

Teachers' current sources of evidence and wider knowledge for teaching included both formal and informal professional learning (PL). Subject associations, a teacher-oriented research community, unions and resources from social media were engaged with independently while other PL was undertaken as part of a school teamfor example, through a hub or centralised National Professional Qualifications. Impactful PL tended to involve not only practical, actionable advice but also sustained engagement and an opportunity to be around colleagues in a similar role. The majority of PL had been experienced at school and trust level, sometimes from in-house senior leaders and sometimes from external providers:

> People in schools more than ever look inwards. I feel like back in the day, I used to get out and about quite a lot . . . but more than ever people don't get that opportunity (OCY)

A central – and related – idea emerging from the data was a concern about *credibility* of new knowledge encountered. This was expressed sometimes as a difficulty in reconciling internal and external messages or initiatives, with one teacher wondering what the next 'big wave of information' was going to be after the current cognitive science interest (MTH). More strikingly, however, credibility seemed to involve the trustworthiness of the source. In-house PL was questioned as being insufficiently 'underpinned by principles' (ENG), 'not as up to date' (EYM) and simply ill-informed, 'gross misunderstanding and parroting' (ENG):

> I felt that he regurgitated the party line, which is necessary. You've got to package it. You've got to market it. But I just thought you don't get it and I'm coming to you for my advice. (ENG)

Resources from the EEF, spontaneously cited by many participants as a source of external evidence-informed knowledge were also subject to these questions of credibility. Responses ranged from seeing EEF findings as inconsequential 'common sense' (MTH) and 'not the be all and end all' (OCY) to a questionable orthodoxy of 'inarguable gospel' (GEO) that was 'reductive' (ENG) and even 'highly suspicious' (OCY):

> It's government funded. I think, inevitably, they're going to make sure that the thinking, make sure that the research that they recommend, supports whatever their policy might be. (OCY)

Although it should be acknowledged that these teachers' involvements with university projects might suggest a predisposition to criticality, the sense here of needing a trusted evidence source is striking, nonetheless.

Conditions created by teacher educators: legitimising learning

Despite the wide variety of collaborations indicated in Table 1, the very act of working with a teacher educator seemed to create some conditions conducive to professional learning.

Firstly, in a profession with prominent workload concerns, involvement with the university brought with it space and a licence to reflect, even to the extent of simply noticing and being reminded of one's existing practices. Beyond the dedicated time, the collaborations also *legitimised* thinking space. They provided an opportunity to 'step back and think and just reflect and slow it down' within 'a system which is very anti-stop and think' (GEO) or simply to be 'allowed to think beyond the parameters of the centralised documents' (ENG). These reflective opportunities also signalled a valuing of teachers' practice:

> The fact that somebody's been interested in what you do and what you can see and your opinion on it is really important. (EYM)

While some collaborations were in school time and others were after school (thus necessitating buy-in from school leaders and individual teachers respectively), this commitment was felt to be enhanced by the university's perceived status, indicated through terms such as 'prestige', 'gravitas', 'higher status', 'kudos' and 'credibility'.

Secondly, reflective space was also evident in the opportunities created to network beyond one's immediate colleagues. For some, the draw was being among 'like-minded' people, with shared interests and roles, while others particularly valued diversity in terms of age phase, subjects and types of school. The more homogenous groups provided reassurance: meeting others made one teacher 'feel like we're on the right track' (OCY) and could even be 'cathartic' (GEO). For many others, however, this was a chance to escape a form of within-school or trust isolation:

> Once you're in your trust you can't get out . . . they don't give you a minute. Everything is like [Trust], [Trust], [Trust]. So you're not exposed to any new ideas. (ENG)

In the face of this insularity, teacher educators brought valuable local social capital, developed over time and often through personal contact – 'It couldn't just be anybody. He knows the right people'

(GEO) – which enabled them to have 'that platform for throwing out these opportunities to meet and discuss and collaborate' (MTH). Once initiated, however, networks might become self-sustaining: 'You have a small group and they organise their own small groups. It starts at the university but it maybe feeds out a little bit' (EYM).

Through observing practice, working together on materials or simply engaging in dialogue, these brokered collaborations often enabled learning from others, by looking for the 'success stories' (GEO). However, despite the familiar metaphors such as 'cherry-picking' and 'piggy-backing' (MTH), the involvement of the teacher educator seemed to move these collaborations beyond purely disseminating existing practices.

Teacher educator attributes: boundary crossing

Returning to the issue of credibility, teacher educators were associated with a form of expertise beyond that available day-to-day in school; they were perceived as 'not someone who's just picked up a paper' (EYM). Their knowledge, variously referred to as 'scope', nuanced understanding', 'clout' and 'authority', enabled them to act as a bridge to 'wider knowledge' and to be perceived as someone who 'knew so much more than the rest of us' (OCY). While part of the appeal was therefore the potential for breaking down research evidence and theory into accessible 'nuggets' or 'breadcrumbs', their brokering went beyond this 'filtering' and 'digesting' to the co-creation of new knowledge.

In doing so, teacher educators offered an outsider perspective and critical voice that was 'different to the trust, not the trust approach' (OCY), one that involved 'ideas you might not necessarily have thought about' (EYM) and which allowed them 'to guide and prompt a group of professionals' (OCY). This guidance involved facilitation rather than direction:

> They're the central bolt of the wheel where you might not necessarily see them moving from the outside but they're needed to keep the whole thing in place. (GEO)

This role was predicated on their neutrality and lack of allegiance to trusts, school hierarchies, exam boards, ideologies or brands: 'Sometimes it can be better to be more honest with people that you don't have affiliations with' (EYM). The lack of an agenda was important, reinforcing legitimised reflection, because: 'in teaching, you don't have anything that's your own. There's nothing that isn't being weighed and measured and watched,' in contrast to university – in this case embodied by the teacher educator – which could be 'your place of complete safety' (ENG). For some, this safe space allowed them to recapture the early sense of purpose which had inspired them to become teachers, albeit tinged with realism:

> That's what the university is really good for. The idealism of, this is what we want to happen in education. But you understand that it's not about that all the time. And so finding a nice middle ground and having conversations . . . what I find important about research and university is that it's okay, this is how it is, but this is what it could be. (ENG)

The awareness of both what is and what could be arose from teacher educators' 'perfectly placed' position between research and practice 'with feet in both camps' (OCY), giving a level of under-standing and practice-related credibility not always associated with university staff. A teacher educator was perceived as 'someone who has still got a grasp on what teaching is like today' (GEO) and who was 'credible' so long as they were still 'dabbling in and out of the classroom' (MTH). In contrast to more research-oriented university colleagues, they had:

> That awareness and knowledge of the classroom educators, that appreciation of the other challenges that go with it . . . they fully understand where you are . . . it's not an idealistic view. It's fully in the know. (MTH)

The contrasting references to idealism in the last two quotations, seen both as a strength and a limitation to be overcome, perhaps serve to underline the delicate pathway being trodden in these collaborations. In this navigation, it was important that teacher educators were able to challenge stereotypes of 'stuffy' academics by managing to 'engage with normal people in a normal way' (OCY) and that they were 'breaking the boundaries of, we're a university; you're a school' (ENG). Much of this was reinforced through respectful, reciprocal ways of working.

Ways of working with teacher educators: reciprocity

A wide range of collaborative activities had been undertaken, with shared objects including observations of practice, developing documentation, joint planning, collaborative responses to issues such as decolonising the curriculum or new assessments and reflection on practice. Often the activity involved a meeting of multiple teachers; occasionally, the teacher educator worked 1–1 with an individual. Observation of practitioners in their own environments was particularly powerful, and not solely as a positive model:

> Watching practice across different groups and key stages as well, that's been nice … It's almost as much thinking I wouldn't do that or that wouldn't work for me, as well as seeing the practice that was really strong. (OCY)

Impacts reported included changes to pedagogy, curriculum and assessment practices. These changes were associated with buy-in from school leaders, through releasing staff or even being involved in projects themselves. Some participants envisaged teacher educators ideally being involved over a period of time with school-level PL in an advisory capacity, helping schools with implementation of ideas. As one teacher put it:

> It would be great if senior leaders that were making these decisions could actually consult with an academic rather than an EEF crib sheet before they start to make policy. (ENG)

The aforementioned position of teacher educators between academia and practice potentially conferred opportunities to support dialogue at a leadership level:

> ITE providers, they have this ability to sort of go up and down the elevator of hierarchy and talk to people at their level. (MTH)

Indeed, talking to people at their level was at the heart of working reciprocally and building trusting relationships. Interactions with teachers were based on mutual respect, supportive of schools' endeavours (e.g. mixed attainment mathematics) and symmetrical, non-hierarchical conversations, so that teachers experienced a process of 'open dialogue' (ENG). This tone was reinforced in some cases by collaboration that took place within schools, rather than at university. Despite the perception, for some, of 'kudos' associated with visiting the university, being in school sent an important signal:

> Actually going into schools sends a clear message that actually we care about what's going on in schools. (GEO)

The concern with school practice extended to negotiated agendas seen as a 'team effort' and 'very collaborative … we have a lot of say of what happens' (GEO) and, in most cases, to tackling issues beginning with problems from practice. In contrast to the usual view of evidence as 'coming down from the top', the experience of collaboration was therefore seen more as schools asking universities, 'is there anything you can do to help with this?' (EYM), while acknowledging that, though general principles might be derived, nevertheless 'as a teacher, part of your role is to understand that research and then put it into practice' (ENG). There was an appetite for future involvement in

school-initiated inquiry projects, described as a chance to 'give my staff some joy that isn't measured . . . It's an actual investment' (ENG).

It was also recognised that, in these relationships, schools, in turn, might reciprocate by offering ITE placements more readily. More importantly, schools gave teacher educators a valuable connection to practice. The complementary contributions were summed up as:

> I want to be told by someone far more well-informed what the research is saying . . . someone's synthesising all that information which is incredibly helpful. The reciprocal element comes in when I can actually say how things are working on the ground. (MTH)

Discussion

It must be acknowledged that, in this very small-scale study, the interviewer was a colleague of the ITE tutors under discussion and, in one of the five sub-units, had led the activity in question. Researching close to one's practice in this way inevitably challenges claims to objectivity in terms of participant responses and possible researcher bias. However, the aim was not to evaluate individuals or activities, but rather to identify generic facets of the roles and mechanisms at play. To this end, the discussion of the findings returns to the three lines of inquiry. I consider firstly the extent to which the teachers' perceptions of collaboration with teacher educators move beyond the usual sources of knowledge to resemble the conceptions of knowledge brokering presented in this paper. I then turn to the question of whether university teacher educators may have a distinctive role to play, by virtue of their position. Finally, I reflect on the potential implications for both parties of this formulation of a brokering relationship.

Each project involved links between teachers and a wider body of knowledge, whether evidence on an issue, such as mixed-attainment teaching; knowledge of pedagogical strategies, as in the case of oracy and early years mathematics; or experience of a process, such as curriculum development in geography and English. Despite participants' stated respect for the teacher educators' expertise, the process was generally not that of the 'expert bringer of research' (McLaughlin and Black-Hawkins 2004). Instead, the relationship with these forms of knowledge was open and tentative – exemplified in the reference to negotiating both 'how it is' and 'what it could be' - and, with the exception of the early years project, driven not by external priorities, but issues arising from practice. As Boylan *et al.* (2023) suggest, it is this avoidance of conservative, reproductive views of knowledge which characterises transformative professional learning. For participants, this nuanced, situated approach contrasted with the insular and reductive encounters with knowledge and evidence some had experienced elsewhere.

In this bridging and co-constructing work, reciprocity was kept to the fore. Notwithstanding some tangible products, such as curricular materials, the emphasis from participants was on the benefits of legitimised thinking in ways, and with people that, while grounded in local social networks, took them beyond everyday practice. Rather than a one-off encounter, all projects involved the kind of sustained engagement seen as critical by Hartmann and Decristan (2018). Also, evident as a related and consistent theme was the prevalence of boundary objects. Some took the form of tangible artefacts (Wenger 1998), such as curriculum documents or reflective notes in practice; others were more akin to Engeström's *et al.* (1995) shared representations, as seen in the co-created oracy and mathematics lessons based on an agreed focus. In each case, the objects were not an integral part of any single participant's practice, but rather shared points of reference created afresh, allowing for new perspectives and ways of thinking.
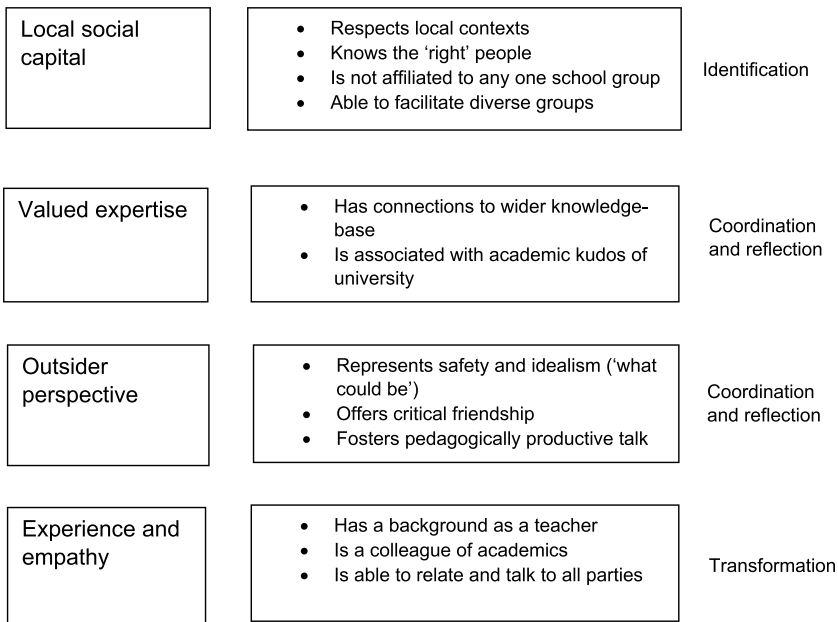
Returning to Akkerman and Bakker's (2011) mechanisms, a further level of analysis of the actual and potential brokering processes at work is possible, as illustrated in Table 2. It is possible to identify common threads of *identification*, as most projects centred on bringing together teachers in new ways that highlighted positionality in some way; *co-ordination*, as new ways of working on

shared objects were conceived; *reflection*, as new perspectives challenged inward-looking practices and *transformation*, as new relationships and practices developed over time. Building on actual experiences, it is also possible to envisage further developments which may helpfully make some of the implicit processes more explicit.

Table 2. Mapping findings onto Akkerman and Bakker's (2011) mechanisms.

	Current practice	Possible development
Identification	• Bringing together 'the right people' • Networking with both 'like-minded' and different colleagues	• Identifying current practice and positionality at the outset more explicitly
Coordination	• 'Guiding and prompting' a group of professionals • Bringing 'credibility' • Allowing teachers 'a lot of say' • Working with shared objects	• Negotiating explicit working protocols together
Reflection	• Moving beyond isolation or 'the trust approach' • Being 'allowed to think' • An outside perspective, providing 'your place of complete safety'	• Openly discussing the role of the outsider perspective
Transformation	• Developing ongoing, trusting relationships • Exposing teachers to new ideas • Talking to teachers and leaders 'at their level'	• Beginning with an explicit inquiry question

Having identified the characteristics and mechanisms of knowledge brokering at work in these collaborations, I now turn to the question of a possibly distinctive contribution made by teacher educators by virtue of their positions at the boundaries of different practices. A common thread in participants' accounts of sources of knowledge for teaching was a concern with *credibility*. These teacher educators seemed to have a peculiar form of credibility comprising four elements that combine to enact the mechanisms of knowledge brokering (Akkerman and Bakker 2011), as shown in Figure 1.

Local social capital	• Respects local contexts • Knows the 'right' people • Is not affiliated to any one school group • Able to facilitate diverse groups	Identification
Valued expertise	• Has connections to wider knowledge-base • Is associated with academic kudos of university	Coordination and reflection
Outsider perspective	• Represents safety and idealism ('what could be') • Offers critical friendship • Fosters pedagogically productive talk	Coordination and reflection
Experience and empathy	• Has a background as a teacher • Is a colleague of academics • Is able to relate and talk to all parties	Transformation

Figure 1. Four brokering attributes of teacher educators and the mechanisms of brokering.

In contrast to the prevailing centralisation of professional learning (Greany *et al.* 2023), one asset of the teacher educator is very often their local social capital. Understanding local contexts and networks and knowing 'the right people', allows them to bring together groups and work on themes which cut across the boundaries of school groups and go beyond policy-level ideological orthodoxies. In doing so, individual teachers' positionalities can be foregrounded and similarities and differences are identified. The mechanisms of coordination and reflection, in turn, are well served by the teacher educator's position as an 'expert' outsider. Rather than transmitting knowledge, however, their expertise can create a legitimate space for thinking, as they make connections to a wider knowledge-base and act as a critical friend, untainted by everyday agendas. They thereby create the conditions of trust and reasoned debate from multiple perspectives characteristic of pedagogically productive talk (Lefstein *et al.* 2020). Finally, teacher educators occupy a place between different worlds (Shavelson 2020). This enables them to 'go up and down the elevator of hierarchy' and communicate with credibility with teachers, school leaders and research colleagues to support the transformation of practice. Taking these attributes together, Furlong's (2013) bold case for teacher educators' unique capacity for bridging between forms of knowledge begins to seem plausible.

Conclusion

This has been an account not of large-scale, funded partnership projects, but of the somewhat organic opportunities for small-scale collaboration arising from university teacher educators' ITE work with local schools. I argue that the work undertaken does have hallmarks of knowledge brokering in terms of aims, relationships and ways of working. Indeed, brokering provides a helpful theoretical tool for thinking about the mechanisms at and common principles which may guide future collaborations. Working in a negotiated, reciprocal way to co-create locally relevant knowledge has the potential to respond to some of the issues that separate educational research from practice (McIntyre 2005). While the 'scientific' outcomes of a What Works stance may usefully offer up broad principles worthy of consideration, informal close-to-practice inquiry offers a complementary opportunity to exercise professional judgement in specific contexts and supports career-long learning.

For HEIs, then, these small-scale, situated forms of collaborative professional learning are a distinctive contribution in a diversified marketplace of policy intermediaries and 'edu-guru' entrepreneurs. For individual teacher educators, the complex interaction of their sub-identities (Swennen *et al.* 2010) may become an asset and the 'proleterianisation' of their role (Ellis *et al.* 2014) offset somewhat. For teachers themselves, the reframing of university teacher educators as partners with distinctive brokering attributes, as opposed to external providers of professional development, provides a vision of professional learning with space to reclaim professional judgement and agency. These opportunities also have the potential to promote research engagement by shifting thinking away from a view of research seen as detached from practice and with relatively little influence on daily practice (Nelson and Campbell 2017). Finally, for HEI-school partnerships as a whole, relationships may be reconfigured on a more reciprocal and holistic basis with professional learning for all parties grounded in specific contexts.

Based on this small, exploratory study, further research can be envisaged. It might seek to:

(i) investigate these mechanisms and attributes in other national contexts to build a more coherent model of reciprocal brokering practices which value and preserve school autonomy; (ii) complement teachers' perspectives with those of the teacher educators involved, with a view to understanding the structural pre-requisites of incorporating brokering relationship with schools into ITE work profiles and (iii) explore ways that HEIs can position themselves in the professional learning marketplace to promote the distinctive assets of their teacher educators.

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