BUILDING RESEARCH CAPACITY AND RELATIONSHIPS IN SCHOOLS: THE CONSEQUENCES OF INVOLVEMENT IN 'CLOSING THE GAP'

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INTRODUCTION

The aspiration in England for schools and teachers to engage *in* and *with* research (Everton et al. 2004; CUREE 2011) is not new, stretching at least as far back as 1950s, though other countries - including Scotland - had a longer trajectory, stretching back in the late 19th Century (Nisbet and Broadfoot 1980; Nisbet 2005). In 1970s, Stenhouse's model of inquiry was a significant catalyst, (Stenhouse 1975; 1981), underpinning the subsequent development of action research in England (Elliott 1991; Somekh 2010). It can also be seen in analysis of the impact of research on both policy and practice. Later a new strand argued for 'evidence-informed' practice , in the sense of adopting a tightly defined 'scientific' model of empirical research, and began to be advocated in 1990s, for example by Reynolds (1991) and notably Hargreaves (1996). This position was reinvigorated by the Coalition government's adoption of Ben Goldacre (2013) as a policy advisor, who, drawing on his own background in medical research, largely rejected anything other than randomised controlled trials as the basis of a suitable evidence base in educational research. Various other research organisations adopt a similar approach, notably NFER (Hutchison & Styles 2010), ResearchEd (2015) and Educational Endowment Fund, and have all been firm advocates of the development of such research in schools. This approach has however been criticised by some, including Hammersley (1993) and Hattie (2015) , who argue that research is a complex practice in itself, which it is inappropriate to expect schools to do, and to do well. Futhermore, there had been a long-running criticism of much that was termed research in schools (e.g. Foster 1999), and allied to this were rival assumptions about teaching itself, with the critics wary of a view of teaching as the execution of scientifically-informed effective procedures, preferring to conceive it a values-laden endeavour (Biesta 2015). In short, whilst many have long considered the involvement of schools with research to be important, there has been considerable disagreement as to what this means, especially what kinds of research matters in this context.

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A significant motivation for initiating the CtG project was to stimulate schools' involvement with and in a particular model of quantitative research (See Chapter X), and was part of a wider Goldacre-inspired drive towards an evidence-informed profession (Goldacre 2013), but which would not only use such research, it would also organise and conduct it. The then Coalition's policy vision compared schools with hospitals, organising and carrying out randomised controlled trials in order to find out 'what works', and was connected to a wider desire to encourage better use of data within schools (Brown 2013). This policy initiative was allied to a wider aim of encouraging schools to be independent of external advisors and controls, notably local authorities, through academisation, and independent of universities' involvement in initial teacher education, though more school-led initial teacher education. However the policy did not just envisage schools acting independently; it encouraged the lead school, designated a 'Teaching School', to form a robust network of schools - the 'Teaching School Alliance' - which would receive additional funds to support a range of ITE and CPD activities; the term 'teaching' in these titles might appear odd for a school, but was also drawn from a medical analogy with 'teaching hospitals' (see DfE 2014; National College for Teaching and Leadership 2015). These alliances would have to be engaged in ITE, CPD, school-to school support, and research and development.

The project therefore went beyond developing an evidence-informed profession, towards an evidence-*generating* profession, but with a very tight definition of what should be considered 'evidence', which had implications for how the schools' involvement unfolded. In the first phase of the CtG scheme, teachers were positioned more as research assistants implementing the interventions that had already been selected and conducting the RCTs, rather than deciding for themselves in which areas of their practice and kinds of evidence they wanted to engage.

However, later in the scheme, through the 'Early Adopters' scheme, which supported 50 schools or alliances in conducting RCTs, schools designed their own RCTs focused on their own concerns and so genuinely became a more evidence-generating profession and it was apparent that schools' involvement in the project was both shaped by and shaping their attitudes to and capacity for research more generally – their 'organisational epistemology' (Toh et al. 2014). Moreover, the

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overall project was to be conducted by Teaching School alliances since 'research and development' was one of the key six elements of teaching school status (DfE, 2014), which meant that the developing relationships within these alliances, across different schools, was inevitably part of the research process.

It seemed expedient to investigate these developments further, capturing some of the consequences of this unique experiment, even though this was not part of the initial principal design of the RCTs. More broadly, the CtG project can be viewed as an example of what Brown terms 'luxury' research, as it is it both an exemplar of the kind of research which is seen as valuable, and also seen as politically prestigious, thus having both use and signifying value (Brown 2015, p. 23). Researching its wider impact is therefore potentially helpful when considering other innovations based upon luxury research. It is an idiosyncratic - although potentially comparable - case study.

Given this background, this chapter focuses on three key research questions:

- What was the engagement with research in the schools before they became involved in the Closing the Gap (CtG) scheme and how did research engagement develop in the schools as a result of the scheme? This investigates the initial patterns of research engagement and how they altered as a result of the CtG project.
- How did the schools and alliances conceptualise school-based research and how did this changed as they engaged with the scheme? This area explores whether and how schools adopted the methodological norms which underlay the project, notably the significance of randomised controlled trials, particularly in contrast with other models of education research, notably action research.
- How did the professional research relationships develop within and between teaching schools, their alliance schools, and with other organisations, as a result of the project? In particular, it looked at the ways that wider collaboration played a part in the development of research across schools.

In order to address these aims a questionnaire was sent out to all schools involved in the CtG scheme in June 2014, which included questions on the schools' approaches and attitudes to the project and research more generally. Second, ten school leaders with the responsibility for coordinating the research ('trial coordinators') in various teaching school alliances were

purposively selected in June 2015 for interview, in order to explore the nature and structural position of research within these alliances.

LITERATURE REVIEW

Given the uniqueness of the CtG project, see paper 2, it is perhaps unsurprising that there is little research literature on the effect of involvement in external research on developing research capacity in schools (though see Cousins et al. 2006).

Nevertheless, these issues obviously sit within the considerable literature on school engagement in/with research, which overlaps both with a wider field on knowledge mobilisation across different sectors, including the academic research community's concerns with impact (e.g. Hemsley-Brown and Sharp 2003; Maynard 2007) as well as with the considerable literature on teachers' professional development, school improvement, and evidence-based policy-making (e.g. Brown 2015). As a result, terms such as 'research', 'knowledge', 'evidence', 'impact', 'enquiry', data-use' are used in conflicting ways, as are such terms as 'exchange', 'mobilisation', 'transformation', or 'dissemination' (McKibbon et al. 2010) to add more confusion. Valuable starting points for opening up these issues are four reviews of existing research: Hemsley-Brown and Sharp 2003, on the *use* of research to improve professional practice; CUREE (2011) on 'engagement in and/or with research' (p. 1) - the paper which introduced this valuable distinction – and includes a comparison with health and social care; Dagenais et al. (2012), a Canadian-based review of the 'use of research-based information and determinants of use' (p. 1); Nelson and O'Brien (2014), on 'using evidence in the classroom'. However, an indication of the complexities of the field, and the effects of different review criteria is that there is very little overlap in the papers finally selected by the different reviewers; for instance, the only study in common between CUREE (2011) and Dagenais et al. (2012) was Hemsley-Brown and Sharp (2003) – itself a review.

Overall, the literature raises three particular issues for the CtG project.

In/with research. A consistent theme is that generally teachers do not engage with research, either existing research or internal data – let alone in research (Williams and Coles 2003),

chiming with the policy-makers' perceptions at the start of the project. Teachers often held negative or cautious attitudes towards research (e.g. Shkedi 1998; Nicholson-Goodman and Garman 2007). Engaging in research was however, an important catalyst for engagement with it – conducting one's own research often involved reading and critiquing other research (Nisbet 2005; Cousins et al. 2006; Lafleur 1995; Nelson and O'Brien 2014).

External support for research was important in many studies, whatever the methodology, and alongside internal school support (e.g. Timperley & Alton-Lee 2001). This typically consists of support in research methodology and practical issues (e.g. Timplerley et al. 2009), often from universities or other research institutions and professional development providers. Throughout CtG, schools were offered various training events, both for the development of research capacity in schools (Network events), as well as the Early Adopter training sessions in running small-scale RCTs, and statistical analysis, including an online programme for analysing data (Paper 1).

CtG involved teachers in research, as they had to carry out the testing and the interventions, but it did not itself require engagement with wider research literature. However, the main project itself was so large that there was the risk that individual teachers had little sense of the practice of research. Paradoxically, it could have been too gargantuan a project to enthuse teachers in research, as they had often minor technical roles in the overall project, especially in the early phase.

Teacher/ School/Alliance. A critical factor in how teachers' value research is the schools' institutional research culture (Dagenais et al. 2012), for instance the extent to which it is open to organisational learning generally (e.g. Ratcliffe et al. 2005), and experimentation and initiatives in particular (e.g. Shkedi 1998); this is linked clearly to school leadership (Anderson et al. 2010). The CtG project demanded school leadership level involvement, and indeed required schools to address the issue of being a control or intervention group only within the trials. Moreover, the project worked with teaching school alliances which could provide a more networked research culture as an example of joint practice development (Sebba et al. 2012; Judkins et al. 2014), but also created an additional layer of complexity. For the CtG project, the wider changes in school entities, with academisation apace, and different alliances and groupings emerging offered new possibilities for the schools, though also meant that the landscape was unsettled.

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Generic/contextual. There is an important spectrum from the development of greater use of data by teachers and schools within their existing practice to inform decision-making, and research as a formal practice, often aimed at external use. From a research perspective this is the issue of generalisability, but from a school perspective, the value of research is seen in terms of 'relevance' (Miretzky 2007) and 'context' (e.g. Everton et al. 2000). Two of the review articles distinguished between different types of research. Dagenais et al. (2102) contrasted '*general* research-based information, which is the scientific evidence found in literature...and *local* research-based information, which is produced locally and intended for local use' (p. 286, original emphasis); CUREE (2011) made a similar comparison, though had two categories of teacher 'research/enquiry' (p. 26). The CtG project was very clearly at the 'general' end of this spectrum – though this might have implications for the particular local context of the schools involved, and for how the different research traditions were understood within schools.

THE RESEARCH QUESTIONS

This section takes the analysis of the interviews and questionnaires to address each of the key research questions for this chapter.

Tracking the changes in engagement with research as the CtG scheme unfolded.

Over the course of the two year scheme 'the programme worked with 206 teaching schools' (p. 17, Churches, 2016). In the first year of the scheme '387 trial site schools took part in the trials' and in the second year another 286 schools completed the trials (p. 17, Churches, 2016). The teaching school alliances were spread across the country, and between urban and rural locations. However, as potential sites of research the complexity of the structures of these alliances was note-worthy:

> *The Empower Schools Alliance is a collaborative group of Primary and Secondary schools operating within the Stockport area. The Alliance works with a range of strategic partners including Oakridge Teaching School in Westley, Harely Local Authority and a range of*

Higher Education Institutions, including Cavereley University and Eastridge University. Hastley Primary School is the lead Teaching School, which provides the Alliance schools with a range of school improvement, CPD and wider developmental opportunities. (WL)

We work with Cavereley University, work with a special school, we work with a number of other primary colleagues, we work with an early years nursery, so it's grown as the years gone on. But also there are two teaching schools in Purton so we're trying work collectively with them so that we are meeting the reach between the two of us. (TC)

Alliances were working within and between different organisations, such as a number of schools, across different sectors, e.g. primary and secondary, independent and state, faith schools and non-faith schools, local authority controlled and academies, and different practices, e.g. universities and local authorities.

In these alliances, before joining the CtG scheme, there was often research going on in different ways, and both engaging in and with research were already firmly embedded in the teaching school alliances for example:

X primary school has been developing its evidence based practice over a number of years. The school development plan actions are conducted in teams, using evidence based research as a way of addressing school improvement priorities. This has served to develop a culture of enquiry across the school, with staff supporting each other within this model. (WL)

Before Closing the Gap came along there was a lot of research already going on in the school and existing partnerships (BH)

I gathered the team of 12 people, two from... all six faculties. And we had a term when we would meet biweekly and we would systematically work through the literature review. (FG)

We've always kind of ..we've had to research before we've delivered anything. So we've always quoted from papers or books that are on a specific subject area (PV)

Much of this existing research also continued in parallel with schools' involvement in CtG.

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However, involvement in CtG also seemed to catalyse changes in schools' engagement with and in research, as well as other changes, in a number of ways. Firstly, one trial coordinator perceived that involvement in the CtG scheme acted as a catalyst to enhance research engagement across her school and alliance. Before the scheme much of the responsibility for the action research fell on her shoulders but involvement with the CtG scheme brought many more colleagues in her school and in her alliance into direct involvement in research and indeed, one of the trainee teachers, in mathematics undertook a mini RCT.

Secondly, trial coordinators reported developments in their expertise in research, for example:

> *In our first year I feel like we have come a long, long, long way in terms of our understanding of research and development. And what we've managed to carry out and develop our expertise, has been a really steep learning curve for us (TC)*

Thirdly, involvement in CtG did seem to act as a direct catalyst for schools to develop their own research projects, particularly those school involved in the early adopter scheme, who conducted their own mini RCTs, for example:

> *Initially, all the thinking about RCTs greatly motivated myself, I knew that part of our school development and appraisals were about developing research methodologies, so each time I attended network meetings with CfBT I then returned and updated staff and we conducted 12 small RCTs across the school on a theme of staff choice. (WL)*

For another school who were involved both in the main scheme and in the early adopter programme did perceive that the main scheme was 'a bit out of our hands' but they also perceived that their involvement in conducting their own mini RCTs allowed them to develop their research skills in running RCTs and they perceived that over time their skills became 'more sophisticated ' leading to, across the alliance, the development of research leads and significant links between the alliance and research publications. These issues will be explored more in area 3. In addition, in this school, RCTs became much more the norm over a previously strong tradition of action research. As the trial coordinator said:

> *the action researchers have become RCTs, I think they have become more significant.* (MM)

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For others the involvement in CtG, both in the main scheme and in the early adopter scheme, perceived that RCTs complemented other research methodologies, such as action research. For example one trial coordinator involved in the main scheme commented:

> *It was very interesting for me to see that methodology (RCT) come into teaching and I welcome it. I think it is an additional tool for schools to be able to decide what's likely to have the biggest impact. I have a strong background in Action Research and I think that ultimately all changes in schools, when you want teachers to change what they do, will boil down to them trying out things and evaluating it in a very qualitative way and I think RCTs will never replace the need for teachers to try out things and evaluate them for themselves.* (JP)

Fourthly, more engagement <u>with</u> research seemed, to catalyse one school's future engagement with research and the need to look at other research to inform their practice:

> *For next year I've been thinking…is there any kind of research around [working with families] that could provide us with some evidence as to the impact?* (TC)

Finally, involvement in CtG seemed to have other consequences, beyond changing engagement with research such asdeveloping a more sophisticated approach to the use of school-data in addressing issues:

> *There hasn't been any other research that has grown from this…but being involved in closing the gap has made us develop the parental engagement element and to take a more holistic view, wider than our strengths in tracking and data.* (RY)

However, not all were as confident or so committed. For example one trial coordinator, even with training in conducting her own RCTs did not feel able to conduct them

> *We have considered mini RCTs and I and another colleague went to the first training session and, although I didn't feel I had the capacity to do a mini RCT myself, I encouraged another colleague to do one, but she was really scared off by the maths* (HD)

In addition, one other teaching school alliance, with a strong and vibrant research culture felt the scheme was badly organised and did not recognise the considerable engagement that alliance already had with research, and so their participation dwindled.

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Overall, though the evidence from the questionnaires and interviews suggest that CtG had been influential in these alliances, both at the most basic level of raising the question about conducting their own research, as well as stimulating some to carry out their own projects.

Changing conceptualisations of research over the project

It seems that CtG stimulated an interest in research in schools and alliances in a number of ways outlined above, but how did they conceptualise this? Research is typically thought of as a university-based practice, but if it is school-based instead, it may be influenced by schools' priorities and practices. Firstly, for many respondents a concern with school improvement underpinned their conceptualisation about the purposes of research-in school:

> *Research is tied in with school priorities and particularly the impacts on teaching and learning.* (WL)

> *We wanted to be involved in something that was a national project, to see if we could learn any more, because we want to improve, because that's what we do all the time - can we improve?* (TC)

Their approach was pragmatic, but can also be seen as instrumental; research had to fulfil wider organisational priorities. This meant that it was closely associated with other organisational requirements:

> *Well, we do research as part of our performance management targets…That's something that the headteacher at the school is very keen on.* (RY)

Secondly research also sat alongside performance management, school-to-school support, or professional development. The choices within these were also pragmatic; one respondent described a plan for school-to school support which was presented as a research project, because,

> *Schools that don't have a higher category come to the school that's outstanding and they look for faults rather than look for what they could do better. Because of the mindset of the people! "Oh they're not that brilliant because they were doing this that and the other!" (*IF)

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Further, schools' overriding concern with a range of issues seemed to inform their methodological choices for research, and in particular whether RCTs replaced or supplemented action research. The respondent continued,

> *...so it's kind of research project. But it is set up slightly differently. It's not a random controlled trial, and it's kind of a joint professional development, a bit of CPD really*. (IF)

The research element of this support was therefore a vehicle for other purposes – a way of allowing schools in different categories to work together, so that support was not explicit or paternalistic. Moreover, the quotation also shows how respondents valued a variety of methodologies for achieving different aims, as another added:

> *So we are kind of dipping our toes in, and, if it's a kind of buffet, we are trying to get all the different food for it!* (TC)

This did not mean that the choice of methodology was arbitrary, as respondents considered that RCTs were a rigorous form of research,

> *We've done quite a bit of work involving action research and enquiry-based practice and all staff leading their own CPD...but nothing as structured and tighter* (WL)

This was considered important in informing policymakers:

> *For education now, we need to be providing a bank of evidence-based research in order for what actually works to be done in schools, rather than on the whim of a minister* (IF)

Thirdly, as indicated above, RCTs were conceptualised as a more rigorous form of research particularly in those schools involved in the early adopter programme and these respondents described RCTs in language like 'rigorous', 'produce hard data', 'tighter and more structured', 'more focussed' and more 'methodical' resulting in evidence of 'what works'. For example one trial co-ordinator, an early adopter, said in relation to the mini RCTs in which his alliance was involved:

> *We need to know what works....So I suppose there's a general methodical approach to things and a rigour associated with what we are doing. ..... So we now have a relentless focus on those things the evidence suggest works best* (JB)

Another conceived of research involving RCTs as giving teachers more security in their actions:

> *It has given staff a structure, a security blanket, to enable staff to collect some hard data to facilitate pupil progress reviews.* (JB)

Furthermore, RCT research was conceptualised as being more responsive to the immediate context of the school and accessible to all teachers in comparison with published research:

> *I mean one of the problems that we found around research is contextualising it and translating you know a degree of theory into practice.* (JB)

In this case the trial coordinator perceived that the nature of the mini RCT research that they were conducting could only be very specific to their own context and it was valuable in giving them hard data into 'what works' in their context. Another felt that the mini RCTs conducted as part of the early adopter programme in their school were more accessible for staff, and had allowed teachers to see how useful research in their own school context could be to inform their practice.

Contrary though to the perception that RCTs made research were more accessible to classroom teacher others had different perceptions about the appropriate organisational place for conducting and using RCTs, with many considering that they were a more appropriate tool for senior leadership than individual teachers:

> *Ultimately all changes in schools boil down to teachers trying things out and evaluating these qualitatively, so RCTs will never replace the need for teachers to try things out and evaluate them for themselves. But in terms of school leaders making decisions about whether to buy in one intervention or another, RCTs provide a large scale project that has been analysed statistically and had control groups which add validity.* (HD)

Furthermore, one trial coordinator said that for senior leaders 'engagement with research and the research process' had allowed them 'to talk to each other more often and more purposefully'. This echoes the debate in the literature about generic and local research, in that individual local research is positioned alongside more generalisable studies. However that was a twist here, in that schools and alliances had also to decide if generic research would be applicable to them. This was important because the CtG project might show that a particular intervention was generally ineffective, but they considered that it was effective, and vice versa:

> *When last week I met with the schools with whom we carried out the project, some of them, regardless of what the outcomes are going to be in terms of the data, said "Well, we really like this and are going to do it". And I've said "Well, are we going to wait until we see the impact in terms of the national data before we do anything else?" To which they've already made their minds up, and are doing it.* (TC)

Given that any intervention might have been effective in some schools or alliances, this was not necessarily irrational. Another respondent used the notion of 'context' to explain school decision-making:

> *And then we'll do a six-week trial of that, that's data driven, and then if it makes a difference in the six weeks then obviously it's working and we'll continue with it. If it doesn't make a difference in those six weeks then we know it isn't working in our context. And it's not that the research is incorrect, it just doesn't work in our context.* (IF)

Her own local data would be used to inform the school leadership, and take priority over the generic findings, within school's overall educational aims. Thus, school or alliance priorities were the main determinants of research, and informed its deployment and the weight given to it.

Overall, at the very least, RCTs were conceptualised as being a useful additional tool in the repertoire of research methods schools could draw on. For some however, and these were mainly those in the early adopter programme, the use of RCTs were considered valuable in being able to provide many significant benefits, and, for a few, became the principle mode of generating research evidence in their teaching school alliance.

<u>Developments in professional research relationships</u>

The third area concerns how professional research relationships developed within and between alliances, and with other organisations, as a result of the project. Further, the distinction between different kinds of research for teachers and senior leadership, in the immediately previous section, would have implications for organisational structuring within schools:

> *Classroom teachers very much want to see whether there were new things that would improve the quality of provision for children, and improve achievement for children. So they were looking specifically at their classes. So they were looking for a very child-led sort of focus, whereas I'm looking from their coordinator's point of view.* (IF)

Nevertheless all research needed institutional support.

> *I've seen people try to do research projects in school when they are not supported by the school, or the senior leadership team, and it's very hard. So it really doesn't come from the top, but not top-down in a forced way. But it needs to have its input bottom-up, with the support of the top. If that makes sense.* (IF)

This reflects the findings in the literature (Dagenais et al. 2012).

However, there were some really radical and substantial developments in research relationships and in collaborations within and between teaching school alliances reported as a result of the CtG scheme. Firstly, at a very basic level the project seems to have stimulated discussions between schools about research that would not have otherwise have taken place:

> *I mean what was nice about doing this research project was actually just the discussions you have with people from other schools, and you know what's currently going on in their provision.* (PV)

However, in other teaching school alliances more formal research relationships developed, for example one trial co-ordinator reported that CtG has result in the formation of research development teams:

> *Across the Alliance we now have research development teams to replace the cluster groups. RCTs now drive the whole process of improving teaching and learning.* (WL)

This also resulted in alliance meetings regularly discussing the research taking place within the teaching school alliances. Another trial coordinator talked about how collaboration and sharing of research has developed across his alliance:

> *...and it used to be an in-house thing, you know, it was just our school really. So I think may be the project has brought us closer together because we've got these steering group meetings with the X teaching alliance, and now research and development is now a standard item on the agenda.* (KG)

In addition, a network of 'research leads' were created who 'meet up once a half term to sort of share good practice about what we do about research'. In one teaching school alliance two

professional learning communities already existed but involvement previously in an EEF project and now in CtG was perceived to have:

> *widened our own research into what professional development looks like and the development of teacher learning communities.* (JB)

In addition, in this alliance, they have also trained up 'specialist leaders of education in professional learning communities, and actually how to deliver research and the RCT element is incorporated with that as well'. The role of 'research lead' had often emerged out of or, if it already existed, been galvanised by the CtG position of 'research coordinator' – indeed that fact that it was possible to identify such individuals to interview was significant in itself (see McAleavy 2016; Bennett 2016; Riggall and Singer 2016)

Second, these enhanced research relationships also resulted in much more sharing of research across the teaching school alliances through, as said above, in alliance meetings, in school staff meetings, but also in organising dissemination conferences and in writing research reports and other publications.

Third, these developments and research relationships also involved other parties such as local authorities, for some alliances:

> *Local authority conversations are becoming more significant. The LA has seen the enthusiasm for CtG within schools and wants to know more about what has been going on* (WL)

In addition, Higher Education Institutions (HEIs) were also seen to be important partners in research relationships for some teaching school alliances, particularly HEIs that they had already had links with. As one trial coordinator said:

> *You know you can't miss out the higher institutions as well, and they should form part of what we're doing.* (GE)

This teaching school alliance was organising a conference on research which included an invitation to HEIs as it was committed to having 'more of a collaborative approach' with HEIs. As a result, research coordinators and head teachers from the alliance met with representatives from higher education to facilitate collaboration more widely. Another trial coordinator saw previous

relationships with local HEIs as a means to collaborate with them on publishing research. These links, though, very much suggest that teaching school alliances are seeking to become leaders in generating research, a role which has previously been the domain of HEIs.

This then raised a wider question about schools as leading educational research in their own right. A sense of empowerment was manifest in some responses, and how it might develop:

> *We met with the 50 other schools that were part of those projects, and we were in that room and we were talking, we speed-dated about what we were going to be doing, that was such an empowering, and uplifting hour to spend just talking to people, amazing ideas and actually it was being driven by the profession* (TC)

Here is another respondent:

> *We might begin to think about research in schools - and again its borrowing from the medical field - as specialising in a particular area. So in the same way as you have...a hospital that focuses on specific areas, why don't we apply that to schools? So if you have a school where they are naturally gravitated towards something like growth mindsets, it might be an idea to, for schools and for government funding to create a sort of 'field hospital' in a particular area. And over a number of years they would specialise in an area, and then share that practice with other schools.* (FG)

This would have implications for the inter-relationship between HEIs and schools in educational research; many pointed to strong links with universities though usually in initial teacher education. Some also had research links, though in a range of methodologies, and not just in RCTs. One had established links with a US-based university, which had helped establish a research group, and developed some joint research. The links were more generally through initial teacher education and professional development. However, what is interesting here is that some teaching school alliances were envisioning completely new structural arrangements for the educational research landscape, taking them well beyond their traditional role as consumers. This is resonant with the policy agenda behind Teaching Schools, mentioned above, as part of their key responsibilities were charged to be leaders in the move to more school-led, school-based teacher education (both ITE and CPD). Here we see some evidence of Teaching Schools also

seeing themselves as leaders in a reconfiguration of educational research. This in turn poses questions for HEIs about their own continuing role in teacher education and educational research (see Callahan and Martin 2007; Fancourt, Edwards and Menter 2015; Fancourt 2016), which is itself also situated within wider debates about the future role and function of HEIs in all types of professional education and related research.

IMPLICATIONS

The discussion presented here sheds valuable light on ways that CtG has acted as a catalyst on engagement in and with research in schools presents some challenges for further development of research-informed schools. First, although the first phase of the main project principally cast teaching school alliances more as technicians in implementation the interventions and then conducting the RCTs, there is evidence to suggest that, even at this level, the discussion of research was stimulated, and, in one case at the very least encouraged other staff in a school to become interested in research.

Secondly, whilst the complexity of alliance structures and links provided the economies of scale to support research leads, it also suggests a degree of fragility in the process. Different organisations and practices may have different motives and agendas, which may make research difficult to organise and support – especially without the support offered in the CtG project. Whilst there are a range of organisations promoting and supporting quasi-experimental type research, it is for the schools and alliances to approach these organisations. Furthermore, although the pragmatic positioning of research with school improvement provides a strong justification for research within school practices, to may dictate both what and how it is researched, alongside or within other aspects of schools' educational aims. Thus, the organisational epistemology of schools' research is located within wider organisational values, and current perceptions of the purity of research may not fit easily alongside these potential conflicting agendas.

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Lastly, therefore, there are wider cultural and political issues as to how teaching and schools are conceived as much as how research is conceptualised across schools and alliances, and across wider links with other organisations. This is about the conflicting perceptions of teaching as much as it is about the place of research in schools, and the involvement of other organisations within this. At one level, this is only to be expected, as many areas of research have their own particular concatenations of methodology and institutional organisations, for example, the involvement of hospitals, universities and pharmaceutical companies in medical research, all with different motives and agendas. However the particular issues in education here are compounded by the wider policy shifts towards school structures, higher education, and the research economy. Long term, school-led RCTS *may* flourish and develop as the most significant form of educational research, or more modestly become a valuable addition to a range of approaches and research organisations, in the light of these other factors. However, it is increasingly the case that schools and alliances are appointing a 'research lead', as the main lynch-pin for school-led projects – often our respondents in this small study – and it will be their endeavours which will determine the future shape of these forms of knowledge generation.

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