



Chapman, C., Chestnutt, H., Friel, N., Hall, S., and Lowden, K. (2016) Professional capital and collaborative inquiry networks for educational equity and improvement? *Journal of Professional Capital and Community*, 1(3), pp. 178-197.

There may be differences between this version and the published version. You are advised to consult the publisher's version if you wish to cite from it.

<http://eprints.gla.ac.uk/119442/>

Deposited on: 04 July 2016

Enlighten – Research publications by members of the University of Glasgow  
<http://eprints.gla.ac.uk>

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

**Professional capital and collaborative inquiry networks for educational equity and improvement?**

1  
2  
3  
4  
5  
6  
7  
8 **Building professional capital and collaborative inquiry networks for educational**  
9 **equity: *Reflections on the School Improvement Partnership Programme in Scotland***  
10  
11

12  
13 **Abstract**  
14

15 *Purpose* - The purpose of this paper is two fold. First, it is to reflect on the development of  
16 professional capital in a three three-year collaborative school improvement initiative that  
17 used collaborative inquiry within, between and beyond schools in an attempt to close the  
18 gap in outcomes for students from less well off backgrounds and their wealthier counter-  
19 parts. Second, this paper will reflect more broadly on the initiative as a whole.  
20  
21

22 *Design/methodology/approach* – This research and development initiative involved the re-  
23 search team working in a nested setting as second order action researchers, consultants  
24 and critical friends with a range of actors across the system. The findings are based on  
25 mixed methods data collected from eight case study school partnerships. The partnerships  
26 involved over 50 schools across 14 school districts in Scotland. Social network analysis  
27 was also used in one of the school districts to map and quantify professional relationships  
28 across schools.  
29  
30

31  
32 *Findings* - Over time, relationships within the partnerships developed and deepened. This  
33 occurred within individual schools, across schools within the partnerships and beyond the  
34 school partnerships. At the same time as these networks expanded, participants reported  
35 increases in human, social and decisional capital, not only among teachers, but also  
36 among other stakeholders. In addition, through their collaborative inquiries schools report-  
37 ed increased evidence of impact on positive outcomes for disadvantaged students.  
38  
39

40 *Originality/Value* - The professional capital of individuals and organisations across and be-  
41 yond schools is demonstrated as an important consideration in the pursuit of both quality  
42 and equity in education.  
43  
44

45 *Keywords* - collaboration, partnerships, professional capital, social capital, equity  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

## Introduction

A myriad of factors interact to determine the educational, health and well-being outcomes and ultimately life chances of children. Decades of investment and intervention have delivered some hard won gains but the relationship between low socio-economic status and poor outcomes and life chances remains as steadfast as ever. Put simply, the odds are stacked against children escaping high poverty settings. Payne (2008) argues that an explanation for this depressing situation is the “*ahistorical, nonsociological and decontextualized thinking [that] dominates the discourse*” (p. 45) which in turn leads to policies based on stronger accountability mechanisms and better paid, caring teachers committed to life-long learning which are doomed to failure because of the simplistic thinking that underpins these policies.

For others, a more optimistic perspective prevails, where education continues to be viewed as a mechanism to escape poverty traps. There is evidence to suggest that schools and education systems can and do make a difference to the outcomes and life chances of children to succeed against the odds (National Commission on Education, 1996; Maden, 2003). In a review of the school effectiveness and equity literature Sammons (2007) concluded that studies show on average the combined school and teacher effect may vary between as much as 15-50% and there is a growing body of research documenting the achievements of collaborative attempts to improve outcomes for schools serving disadvantaged communities (Matthews, 2009; Wohlstetter, Smith and Gallagher, 2013; author 2014).

Schools and the education systems exist in a locality and specific context rather than a vacuum (Kerr and West, 2010). Therefore, while schools can, and do make some difference, they cannot be expected compensate for deep-rooted societal issues by themselves. This argument is supported by research that acknowledges while quality of learning and teaching and management are important, neighborhood is also significant. Research shows that with the exception of prior performance in key-stage tests the best predictor of future examination performance is the neighborhoods in which other pupils live. The study concludes:

*“What perhaps is least evident from the literature but which, on the basis of this evidence, would seem to be important is the social and peer-group effect of the children themselves and the extent to which it is the homes that children come from as much as anything to do with the school management and the teachers that define the school ethos”*

(Webber and Butler (2007: 1251)

It would seem that internal school improvement practice is a necessary but insufficient ingredient for tackling the relationship between low socio-economic status and poor educational and health and wellbeing outcomes. There is a growing body of initiatives that aims to connect internal school improvement and innovation with other schools and educational settings in order to move ideas and practice around the system through various networks

1  
2 and collaboratives. These may go some way to addressing the challenge of improving ed-  
3 ucational practice and outcomes, however, this is also likely to fall short of the challenge.  
4 Perhaps, the most promising signs come from the latest wave of reforms that tie education  
5 in to broader public service provision through a place-based approach in England (Kerr,  
6 Dyson and Raffo, 2014) [and some of the promising endeavors on collective impact in the](#)  
7 [United States \(Henig et al., 2015\).](#)  
8  
9

10  
11 As with many education systems, the issue of educational equity is a key concern in Scot-  
12 land. The recent OECD review (OECD, 2015) argued that Scotland is at a “Watershed”  
13 moment in terms of the development of the education system. The First Minister has made  
14 education, equity and social justice her key priority, with a focus on eradicating the attain-  
15 ment gap. It is within this context that this paper draws on and reflects on some of the  
16 emerging evidence from the School Improvement Partnership Programme (SIPP), a three-  
17 year collaborative, inquiry-driven initiative designed to improve experiences and outcomes  
18 of children from disadvantaged backgrounds and therefore contribute to closing the at-  
19 tainment gap in Scotland.  
20  
21

22  
23 [In an attempt to overcome the issues highlighted by Payne \(2008\) SIPP developed a re-](#)  
24 [search-practice partnership with a similar approach to Bryk and colleagues \(2015\).](#) As we  
25 look forward, this is an important area for future development and there are encouraging  
26 signs that policymakers are paying attention to some of the improvements and gained  
27 made by through these collaborative approaches.  
28  
29

30  
31 [This paper is structured into four further sections. In order to provide a context for the SIPP](#)  
32 [the first section offers a range of perspectives on practice as professional capital, social](#)  
33 [relations and collaborative inquiry. The second section provides an overview of the Pro-](#)  
34 [gramme and a note on methods. The third section offers and some of the findings. In con-](#)  
35 [clusion the final section offers some reflections and a commentary.](#)  
36

## 37 **Professional capital, social relations and collaborative inquiry**

### 38 *Understanding practice as professional capital embedded in social relations*

39  
40  
41  
42 In the Global Fourth Way Hargreaves and Shirley (2012) define professional capital as the  
43 assets residing within teachers and teaching that yield the optimal quality of teaching and  
44 student learning. Professional capital is a trilateral form of capital incorporating human  
45 capital, social capital and decisional capital (Hargreaves and Fullan 2012). These three  
46 forms of capital are interdependent and utilized by educational professionals for the pur-  
47 pose of carrying out the complex and demanding work of teaching and learning. The hu-  
48 man capital of an educational professional consists of one’s individual talent including  
49 skills, knowledge, empathy, passion, confidence, charisma and leadership. This form of  
50 capital resides within an individual unlike social capital that spans individuals, existing as  
51 relationships or ties between individuals providing access to resources and leverage for  
52 change. The third form of capital, decisional capital, is found both within and between in-  
53 dividuals as educational professionals and communities individually and collectively strive  
54 to make wise decisions in complex situations. All three of these forms are dependent on  
55 relationships between individuals and communities (Hargreaves and Fullan 2012). Build-  
56 ing human, social and decisional capital simultaneously demands collaboration on a num-  
57 ber of different levels including between teachers and other educators working within  
58 schools, school districts and outside agencies within the wider system.  
59  
60

1  
2 In a similar vein to the ideas that underpin the concept of professional capital research has  
3 also demonstrated that the collective ability of teachers to affect change is influenced by  
4 the knowledge, expertise and resources embedded in their social relations and social  
5 structures (Daly 2010; Moolenaar et al. 2011; Penuel et al. 2009). The type, quantity and  
6 position of teachers' social relations or social ties are considered as a source of capital.  
7 Therefore, social network theory is helpful in developing our understanding about the  
8 building of professional capital because it frames the learning of educational professionals  
9 as a flow of information through network ties. The development of both social capital and  
10 decisional capital is directly dependent on these social interactions.  
11  
12

13  
14 Human capital is also influenced by social interactions (Leana 2011). Illuminating the  
15 emergence of social phenomena that do not exist at the individual level is a key strength of  
16 social network theory (Muijs et al. 2011). The process of building professional capital can  
17 be examined by tracking the substance and flow of information, advice, problem-solving,  
18 material resources, influence and interpretation through these social interactions. Howev-  
19 er, despite the utility of social network theory to provide a lens through which the charac-  
20 teristics of effective collaboration can be examined, there remain a number of limitations to  
21 this approach including the inability of social network theory to sufficiently expose the na-  
22 ture of "*incommensurate yet meaningful relationships*" (Ball & Juneman 2012: 13). This  
23 suggests the requirement for additional sources of insight. One possibility is to comple-  
24 ment the collection of social network data with other qualitative data regarding social inter-  
25 actions for the purposes of triangulation in order to gather a more complete picture of the  
26 social interactions.  
27  
28  
29  
30

### 31 *Understanding collaborative inquiry: Within, between and beyond-school perspectives*

32  
33 A study of emerging patterns of school leadership (author 2009) explored leadership prac-  
34 tice within, between and beyond schools. This framework, taking a within, between and  
35 beyond perspective has been adapted to offer insights on equity (Dyson et al., 2012),  
36 strategies for improvement and change (author 2014) and most recently collaboration  
37 (Ainscow, 2016).  
38  
39

40  
41 For the purposes of this paper we draw on *within, between and beyond* schools as an or-  
42 ganizing framework for collaborative inquiry. Various forms of collaborative inquiry have a  
43 long history and tradition in many educational systems. Within the United Kingdom there  
44 have been a number of influential programmes over the past thirty or so years including  
45 the Improving the Quality of Education for All (IQEA) programme (Hopkins Ainscow and  
46 West, 1986), the national Networked Communities Programme administered by the Na-  
47 tional College for School Leadership in the early 2000s, and more recently elements of the  
48 Extra Mile Programme (author 2013) City Challenge in England (cf. Ainscow 2015) and  
49 Schools of Ambition (Menter et al 2010) and the School Improvement Partnerships in Scot-  
50 land, the focus of this paper.  
51  
52

53  
54 *Collaborative inquiry within schools-* Collaboration within educational settings continues to  
55 gain more and more attention as school networks, chains, partnerships and professional  
56 learning communities (PLC) have been introduced in a number of international settings.  
57 Some of these forms of collaboration are more suited to the fostering of professional capi-  
58 tal than others. There is growing evidence to suggest collaboration which incorporates col-  
59 laborative inquiry is an effective process for supporting change and improvement in the  
60 practices of teachers and other educational professionals (Ainscow et al. 2016; Ainscow  
2016; author 2016; Drew et al. 2016; Snow et al. 2015; DeLuca 2015). This type of col-

1  
2 laboration involves the participation of groups of educational professionals in an ongoing  
3 cycle of inquiry. Collaborative inquiry takes place in classrooms enabling teachers to de-  
4 velop both their knowledge and their practice; it takes place over an extended period of  
5 time; and it involves teachers using inquiry collaboratively. All of these characteristics are  
6 known to be key features of successful professional development and professional capital:  
7  
8

9  
10 *Practice, especially collective reflective practice, then, is integral to decisional capital*  
11 *and, by that token, to professional capital as a whole. In sum, when we add reflect-*  
12 *ive capacity and action research to stocks of human and social capital, we hone our*  
13 *decisional capacity to make informed decisions.*

14 (Hargreaves and Fullan 2012: 101)  
15

16  
17 Many forms of collaborative inquiry involve a cyclic process of identifying challenges, ex-  
18 perimenting with innovative practice, monitoring developments, and making links to strate-  
19 gic improvement planning in schools and school districts. Other benefits of collaborative  
20 inquiry include the flattening of existing hierarchies (Drew et al. 2016); the breaking down  
21 of barriers to enable greater access to social capital; pooled resources (Lieberman 2000);  
22 mutual support mechanisms; and the prevention of individuals or groups taking an inward  
23 or myopic viewpoint. Collaborative inquiry has been highlighted as a valuable vehicle for  
24 positive change whether it takes place within a school (Drew and Priestley 2016; Snow et  
25 al. 2015), across schools engaged in partnerships (Ainscow et al. 2016; Cochran-Smith  
26 2016; author 2010; Fullan 2013), or beyond schools when educational professionals col-  
27 laborate with like-minded stakeholders (author 2015; Ainscow 2016).  
28  
29  
30

31 *Collaborative inquiry between schools-* When collaboration has extended between schools  
32 the benefits of school-to-school collaboration have included the disruption of “deeply held  
33 beliefs within schools” (Ainscow et al. 2012: 201) and a greater willingness of educational  
34 professionals to take risks and reveal weaknesses or gaps in knowledge (DfES 2005; Ain-  
35 scow 2016). These school-to-school partnerships were able to cut across boundaries and  
36 open up pathways for the exchange of new and innovative knowledge (Ainscow 2016) and  
37 mobilise a wider range of resources and expertise than a single school would be able to  
38 access. An additional benefit for educational professionals engaged in collaborative action  
39 research extending across school districts included the elimination or reduction of competi-  
40 tion between schools serving the same area (Ainscow 2016; Ainscow et al. 2012).  
41  
42  
43

44 *Collaborative inquiry beyond schools-* Beyond-school examples of collaborative inquiry in-  
45 volve partnerships between schools and other public services and agencies. The most ef-  
46 fective educational changes leading to school improvements are led and owned by educa-  
47 tional professionals engaged in collaborative inquiry with other educational professionals,  
48 and also with like-minded stakeholders (Ainscow et al 2012; author 2014, 2008; author  
49 2012; Cochran-Smith and Lytle 2009; Earl and Katz, 2006; author 2009; Kerr et al 2003).  
50 When schools work with other services, agencies and community members or groups  
51 such as health and social care and families, an environment can be fostered which is able  
52 to promote opportunities for the personal and social development of students and families.  
53 These ‘beyond-school’ approaches have been motivated by the complexity and enormity  
54 of the equity issues facing families and communities such as economic realities, underly-  
55 ing socio-economic factors, decision-making at the district level, national policy-making,  
56 and global processes. Ainscow summarises the argument as:  
57  
58  
59  
60

61 *Looked at in this way, it is clear that there is much that individual schools can do to*  
62 *tackle issues within organizations, and that such actions are likely to have a profound*

1  
2 *impact on student experiences, and perhaps have some influence on inequities arising elsewhere. However, it is equally clear that these strategies do not lead to schools tackling between- and beyond-school issues directly. No school strategy can, for example, make a poor area more affluent, or increase the resources available to students' families, any more than it could create a stable student population, or tackle the global processes underlying migration patterns. But perhaps there are issues of access, or of the allocation of students to schools, that might be tackled if schools work together on a common agenda*

12  
13 (Ainscow 2016: 2).

14  
15 Tackling between- and beyond-school issues requires schools and other organisations and services to work together for the collective good. Beyond-school collaboration can involve collective impact type strategies such as the Strive Partnership, Harlem Children's Zone and Promise Neighborhoods where educational and social development are coordinated holistically to integrate education, family, social service and health programmes.

16  
17  
18  
19  
20  
21  
22 A collaborative approach is also being used by the City of New York and the Children's Aid Society to address community needs of schools such as Washington Heights. These are examples demonstrating the interplay between the different levels of within-, between- and beyond- school collaboration to affect attainment by being "*tied to an educational vision, with a commitment to and understanding of the whole needs of the child*" (Alba 2016). It is the positive impact on students which is the aim of such collaboration. There have been some recent developments in this area that have attempted to take some of the principles of these area-based initiatives and translate them to the United Kingdom context. Save the Children has played a key role in this activity with their 'Children's Communities in England (cf. Dyson, 2013; Kerr, Dyson and Raffo, 2014) and the more recent experimental programme 'Stronger Communities' in Scotland (author 2016)

23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37 *Collaborative inquiry and impact on students-* There is much research establishing the benefits of collaborative inquiry for participating teachers and other educational professionals. author (2009) argue that extending these claims to benefits for children, particularly to impacts on student outcomes is a risky endeavor, however, although evidence is limited, there is some evidence to suggest collaborative inquiry may also have a positive impact on students.

38  
39  
40  
41  
42  
43  
44  
45 The Equity Research Network (Ainscow 2012) involved teachers from 16 schools engaged in collaborative inquiry targeting the needs of students from economically disadvantaged backgrounds. The teachers identified changes in their practice which positively impacted students and as a result these changes became mainstream school improvements. In addition to changes to teachers' practice, after five years the pupil impact was demonstrated in examination grade increases.

46  
47  
48  
49  
50  
51  
52  
53 A common thread running throughout these examples of student impact is the common motivation of the participating practitioners to challenge and tackle inequity by working both within and against existing relationships, structures and policies (Cochran-Smith 2016). In their systematic review of networks (1990-2005) Bell and colleagues (2006) identified that school collaboration has been found to have the greatest impact on students when the collaborative activity has specific and narrow aims and in the first instance only targeted a small group of students.



## The School Improvement Partnership Programme

### *Detail, design and principles*

The SIPP was a research and development programme designed to improve attainment of children from more disadvantaged backgrounds in Scotland, and therefore contribute to closing the gap in educational outcomes between children from poorer and wealthier settings. This networked approach to educational change involved schools working collaboratively with each other, the offer of external support and facilitation by the national school improvement agency (Education Scotland), the Robert Owen Centre for Educational Change at the University of Glasgow and school district officers (local authority).

The SIPP was designed during the Spring and launched in September 2013. The design principles drew on lessons learned from interventions in the UK and beyond, but particularly elements from: Extra Mile Programme (author 2013); Improving the Quality of Education for All (Hopkins, Ainscow and West, 1994) and City Challenge (Ainscow, 2015). The core principles that underpin this SIPP were:

- partnership working across schools and local authorities with a focus on exploring specific issues relating to educational inequity;
- the use of collaborative inquiry and evidence to identify key challenges, experiment with innovative practices and monitor developments;
- the creation of leadership opportunities and professional learning of staff at all levels;
- a commitment to reciprocity and mutual benefit to all involved;
- the development of arrangements to support long-term collaboration and new approaches to capacity building;
- explicit links to strategic improvement planning in schools and local authorities;
- the involvement of a diverse range of partners including schools, local authorities, Education Scotland and other agencies.

These core principles provided an overarching framework offering coherence across the programme from which systemic lessons could be learned while retaining the flexibility necessary to meet the needs of local contexts. Importantly, SIPP sought to avoid the trap of attempting identify a 'magic bullet', offer predetermined solutions, apply a one-size fits all philosophy or become seduced by Smith's (2013) notion of 'Charismatic Policy'. Therefore the precise approach to the collaborative inquiry was not prescribed, rather negotiated between the schools and the research team to ensure it was fit for purpose. [Approaches to collaborative inquiry that proved valuable and popular were instructional rounds \(Hopkins 2012; City et al., 2009\) and lesson study \(Dudley 2015; Fernandez and Yoshida 2004; Saito et al., 2015; Stepanek et al., 2007\). Of the two partnerships described in detail below, School District E engaged in lesson study and School District F engaged in instructional rounds.](#)

1  
2  
3  
4 The SIPP involved eight partnerships, some of which were made up of two schools work-  
5 ing together within the same school district; while others involved several schools and up  
6 to three different schools districts. In total, 14 different school districts were involved in the  
7 programme. Most of the schools began with only a very small number of teachers involved  
8 and expanded gradually. At the time of writing many schools had all of their staff partici-  
9 pating in some form of activity related to SIPP. Initially four of the partnerships involved  
10 secondary schools, two partnerships involved primary schools, and two partnerships in-  
11 volved both primary and secondary schools. Over the course of the past two and a half  
12 years many partnerships have extended their scope and scale to include additional sec-  
13 tors such as secondary, primary and early years teachers.  
14  
15

16  
17 This programme is underpinned by the knowledge that effective school collaboration ex-  
18 tends beyond the timeframe of a single school year; involves collaborative inquiry; invests  
19 time into building positive relationships; promotes a risk-taking culture; accesses external  
20 expertise; is locally owned and context specific; uses evidence to inform practice and un-  
21 derstand impact (author 2008; Rincon-Gallardo and Fullan 2016; Bryk et al. 2015). The  
22 following cyclical framework was used to guide the participants involved in Scotland's  
23 SIPP:  
24  
25

26 Phase 1: Preparing the ground

- 27 1. Analysis of context (where are we now?)  
28 2. Agreeing inquiry questions (what are our key concerns?)  
29 3. Agreeing purposes (what would success look like?)  
30  
31

32 Phase 2: Exploring the evidence

- 33 4. Using the available expertise (how do we exploit internal and external knowledge?)  
34 5. Collecting data (what further evidence do we need?)  
35 6. Making sense of the evidence (what new insights do we have?)  
36  
37

38 Phase 3: Testing change

- 39 7. Deciding on actions to be taken (What changes do we need to make?)  
40 8. Implementing a strategy (How do we lever and embed change?)  
41 9. Monitoring outcomes (How do we know we have made a difference?)  
42  
43

44 The model aimed to support '*communities of inquiry within communities of social practice*'  
45 which could develop a shared language, both literally and figuratively in terms of values,  
46 knowledge and procedures (Agyris, Putnam and Smith 1985: 34). Furthermore, this model  
47 afforded educational professionals opportunities to develop: human capital by gaining new  
48 skills and knowledge; social capital through interactions with colleagues and outside agen-  
49 cies; and decisional capital through shared discussions and experiences of decision-mak-  
50 ing and by experimenting collaboratively with innovative approaches.  
51  
52  
53

54 The implementation of this collaborative inquiry-based approach resulted in many of these  
55 phases happening in parallel with ideas being revisited and refined along the way. Sup-  
56 port for partnerships throughout this process of collaborative inquiry was provided by regu-  
57 lar visits to schools, university surgeries and seminars, phone calls and email from individ-  
58 uals from the University of Glasgow, Educational Scotland, and school district staff. These  
59 individuals took on the role of a researcher/critical friend and mentor. There were also reg-  
60 ular learning events within partnerships and a series of national events designed to share

and spread emerging practice and research findings across the wider network of partnerships.

The diverse nature of roles and responsibilities of those involved in supporting the Programme made this a rather complex and messy process. For example, the university researchers had to manage the tension of being providers of research expertise for collaborative inquiry, providing general advice and guidance whilst at the same time drawing on their experience as second order action researchers; (author 2010) researching, supporting and developing the intervention which (a) they had designed with Education Scotland at the outset and (b) which they were now a key part of the process. This was dealt with by deliberately taking the stance that this offered a unique opportunity to work in partnership with practitioners, building capacity within the system whilst at the same time building positive and trusting relationships that an external research team would have found difficult to establish and access.

#### *A note on Method*

The researchers supporting the programme focused on the overarching question: To what extent did the School Improvement Partnership Programme contribute to teachers use of more effective teaching and learning approaches with learners from disadvantaged backgrounds?

Data collected from each partnership depended upon the focus of the partnerships' collaborative inquiries.

**Table 1: Summary of partnership outcomes, methods and findings**

Partnership	Intended focus/ outcome(s)	Data collection methods	Summary of findings
A	Improve attainment in primary school literacy and numeracy/maths.	Student pre- and post-assessments, student surveys and presentations; teacher observations; surveys, interviews, focus groups, reports and presentations from educational professionals.	Educational professionals reported increased understanding of the research process of collaborative inquiry; issues around educational disadvantage; and innovative learning and teaching approaches suggesting increased human capital. New leadership opportunities, Lesson Study and Instructional Round participation suggested increased social and decisional capital.

Partnership	Intended focus/ outcome(s)	Data collection methods	Summary of findings
B	Improve attainment in secondary schools by improving the quality of feedback, attendance and parental engagement.	Student surveys, parent surveys, teacher surveys, school records such as student attendance and parent attendance; surveys, interviews and focus groups, reports and presentations from educational professionals.	Through increased understanding of parental engagement; issues surrounding disadvantage; collaborative inquiry processes and leadership opportunities, educational professionals gained professional capital.
C	Use Nurture Groups in secondary schools to improve achievement.	Student mental health survey, school records such as student attendance; surveys, interviews and focus groups, reports and presentations from educational professionals.	Educational professionals developed human capital through Nurture Group Network training; professional capital through pairing with Behaviour Support Specialists; decisional capital through feedback and reflection.
D	Improve school leadership.	(At the time of the data collection this partnership was still developing.)	(At the time of the data collection this partnership was still developing.)
E	Raise attainment in maths through improved learning experiences.	Student surveys, student assessments, teacher observations, parent survey, parent discussions; lessons study observations, debriefing logs, reports; surveys, interviews, focus groups, reports and presentations from educational professionals.	Teachers reported becoming more skilled in their approaches to assessing, evaluating and observing pupils' learning and understanding in mathematics. Participation in Lesson Study promoted collaboration and professional dialogue.
F	Improving family literacy.	Student assessments and observations; parental feedback; surveys, interviews, focus groups, reports and presentations from educational professionals.	Teachers, SfLAs and CLD workers reported increased knowledge and skills relevant to supporting families in disadvantaged areas and relate to supporting family literacy. The development of this human capital was facilitated by relationships among and between educational professionals and families.
G	Improving learners experiences through the use of monitoring and tracking data.	Surveys, interviews, focus groups, reports and presentations from educational professionals.	Educational professionals developed professional capital demonstrated by their increased ability to develop new methods of monitoring and tracking to identify appropriate interventions; lead working groups, school visits and workshops; implement innovative personal support for students.

Partnership	Intended focus/ outcome(s)	Data collection methods	Summary of findings
H	Improving achievement in mathematics.	Pupil assessments, parental feedback; surveys, interviews, focus groups, reports and presentations from educational professionals.	New leadership opportunities, tracking interventions, teacher understanding of the research process of collaborative inquiry, and teacher understanding of disadvantage suggested increased professional capital.

Despite these differences there was also commonality as questionnaires, focus groups and interviews were used consistently across all partnerships for the purpose of programme evaluation.

Case studies of activity across partnerships were developed to offer deep insights into the processes, activity and outcomes. Despite the uniqueness of each partnership focus and activity all partnerships had the common aim of using collaborative approaches to reduce the achievement gap between learners from low socio-economic settings. Thematic analysis was used to examine qualitative evidence. The codes that were chosen related to the research questions and included such key points as programme implementation, working relationships, challenges, forms of collaboration, leadership opportunities, disadvantage and student impact. The data was then sorted according to each of the research questions.

Social network analysis was used in one of the school districts to visualise the informal networks and to quantify relationships. These informal networks were analysed using UCINET.

Five different surveys were collected from 2014-2015 from a selection of participants across the eight school districts. One of the five surveys was a social network survey regarding professional relationships pertaining to the sharing of innovative learning and teaching knowledge. The other four surveys collected a variety of information about school collaboration and the tackling of inequity. A total of 254 questionnaires were used for the data analysis including 192 non-social network analysis questionnaires and 67 social network analysis.

The findings below focus on two of the partnerships. The partnership in School District E initially included only nine educational professionals and 43 targeted students (as of June 2015). The partnership in School District F initially included approximately 18 educational professionals and 26 targeted students and their families. Both of these partnerships have expanded since the initial data was collected.

#### 4. Findings: Building professional capital through collaborative inquiry

1  
2  
3 *Getting started: Building relationships and developing a shared view of the task-* Teachers  
4 *involved in the partnerships interacted with* teachers from other school districts, as well as,  
5 community workers, parents, researchers and policy-makers. For example, in School Dis-  
6 trict F the community and learning development workers (CLD), school district leaders,  
7 parents, teachers, and Support for Learning Assistants (SfLAs) all worked collaboratively  
8 on inquiry-based activities. The aim of this partnership involving nine schools was to raise  
9 attainment in literacy for Primary 6 (ten to eleven year olds) children living in the highest  
10 areas of disadvantage (according to SIMD measures of deprivation). The collaborative in-  
11 quiry was guided by questions regarding the short and long-term implications of introduc-  
12 ing targeted reading interventions by CLD workers outside of the schools and by additional  
13 support for learning assistants working within the schools. Initially, working across bound-  
14 aries proved to be a challenge:  
15  
16

17  
18 *We absolutely have different cultures; different ways of doing business, but that kind*  
19 *of collaboration can only bring good results.*

20  
21 *(Community Learning and Development Leader)*

22  
23 Time was required to develop a shared understanding of the process and negotiate a  
24 common language and understanding that sat comfortably within their own set of profes-  
25 sional identity and values. The collaborative inquiry provided a mechanism and focus to  
26 build a shared view of the task for teachers and community workers both within and be-  
27 tween schools:  
28

29  
30 *... staff felt that relationships between schools and parents were either mended or*  
31 *strengthened due to CLD involvement which will benefit other work in the future.*  
32 *Secondly, school staff felt that their knowledge of CLD work increased and their in-*  
33 *volvement also allowed staff to become more knowledgeable of family situations that*  
34 *could impact a child's learning. (School District Officer F)*  
35

36  
37 In addition to developing relationships with parents and CLD workers, the participating  
38 teachers in this school district and in other schools districts developed relationships with  
39 other educational professionals. The survey data also supported this claim. For example,  
40 in February 2014 the first survey indicated 55% of educational professionals considered  
41 other colleagues (outside their own school) to be major supports and by the time of the  
42 fourth survey this figure had grown to 74%.  
43  
44

45  
46 In some school districts the beyond-school collaboration involved educational profession-  
47 als collaborating with policy-makers and researchers. For example, from the first survey to  
48 the fourth survey the number of respondents who regarded researchers as a major source  
49 of support increased from 22% to 46%. Respondents who regarded policy-makers as a  
50 major support rose from 11% to 25%. These figures are an example of the expansion of  
51 the networks over time to include people outside of schools.  
52

53  
54 At the same time that these networks were expanding, participants also reported increases  
55 in development of human, social and decisional capital.  
56

### 57 *Building human capital through collaborative inquiry*

58  
59 Over ninety percent of respondents to the fourth survey reported an increase in their hu-  
60 man capital such as knowledge, skills, and confidence regarding the use of approaches to  
address educational inequality.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

This survey data was supported by qualitative data from the school districts. For example the partnership in School District E was focusing on improving attainment in mathematics (particularly problem solving for ethnic minority boys) and reported that collaborative inquiry provided opportunities for individuals to acquire expertise in interrogating attainment data, establishing a research focus, learning new skills for teaching mathematics problem solving, and leadership capacity. This partnership's collaborative inquiry involved primary teachers and head teachers, school district leaders, psychologists, and university staff.

In School District F there were a number of different groups who reported opportunities for increasing human capital. One particular group, Support for Learning Assistants (SfLAs), were provided with opportunities to develop new skills such as planning lessons, delivering lessons and participating in between-school shadow observations. The SfLAs explained they had not had these opportunities before. CLD workers also reported increased capacity and expertise in a number of areas including the use of data and evaluation techniques. Teachers also reported gaining knowledge particularly regarding the situations of students and their families by becoming, *"more aware of the range of challenges that some parents in the community faced"* (author 2015:42). Parents benefited too by gaining capacity and confidence in their role as educators and school partners by receiving support from CLD workers at after-school clubs or at home. Additionally, some of the parents benefited by improving their own literacy as described by a CLD leader of this partnership,

*I mean I've been doing my job for 40 years. Feels as if I've been going on about adult literacy for that length of time and this is the first time it's felt to me as if there has been a real positive shift... So, for me this has been amazing.*

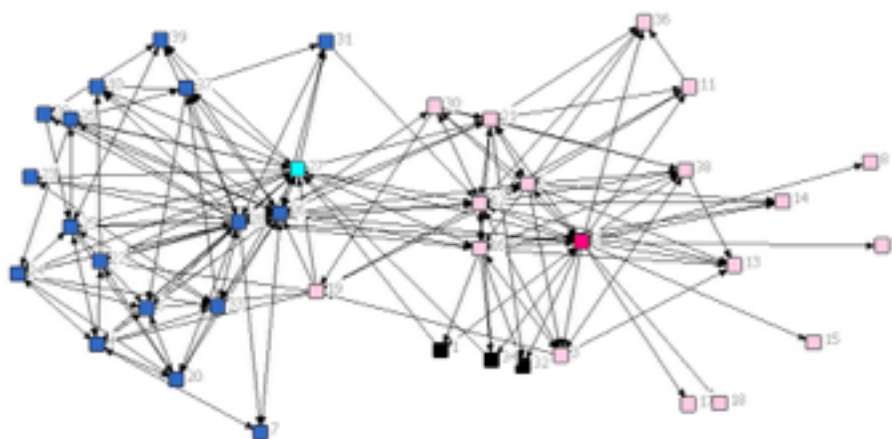
*(CLD leader, School District F)*

These examples indicate that opportunities to develop human capital were not limited to teachers, but included the development of human capital among parents, learning assistants, and community workers.

Many of these examples of human capital relate closely to social capital since the development of skills and experiences often took place in collaboration with others. In addition to the examples mentioned above, there are some additional examples pertaining to the development of social capital.

#### *Building social capital through collaborative inquiry*

In School District E relationships between teachers and school psychologists, quality improvement officers and university staff were built across organisational boundaries and resulted in teachers benefiting from the expertise from this wide ranging group of professionals. *Social network analysis was used to examine the sharing of tried and tested teaching and learning ideas within this partnership. The social network map was constructed by asking educational professionals the following question: With whom have you shared tried and tested ideas [relating to effective teaching and learning approaches]?* Participants listed as many names as they wished with whom they had shared ideas.



### Notes:

*Blue squares - teachers from school A*

*Bright blue square - head teacher from school A*

*Pink squares - teachers from school B*

*Red square - head teacher from school B*

*Black squares - school district staff*

Before taking part in SIPP these two schools did not have any interaction with one another. They were located in separate school clusters or school families. It is evident from this social network map that their participation in SIPP collaborative inquiry led to a number of opportunities to develop social capital through conversations about [learning and teaching](#) ideas. It is also interesting to note that although the school district staff were supporting both schools, they did not have a key role in bridging knowledge between the schools. Teachers in this partnership reported that these professionals beyond the school provided support, but that they allowed teachers to take on the leadership.

*It was kind of just like a big team in terms of who we were, but we were the leaders.*  
(teacher)

The opportunity for teachers to take on new leadership positions and develop new relationships between schools and beyond schools suggests the development of both human and social capital.

The increase in participants' social capital through their involvement in collaborative inquiry was supported by the survey data which indicated 100% of respondents reported an increase in their collaborative working across the partnership. This collaborative working included the use of systematic inquiry and evidence gathering to inform practice and monitor developments according to over eighty percent of respondents.



1  
2 School District F also reported opportunities for the development of social capital. Not only  
3 between teachers, but also between teachers and parents and community workers, there-  
4 fore providing a 'beyond school' dimension to their work. For example in some cases rela-  
5 tionships between parents and the school prior to the collaborative inquiry were reported  
6 to be suffering. Parents had explained the areas in which they felt inadequate such as  
7 having a lack of understanding of new systems of teaching, unfamiliar language and jar-  
8 gon and different learning styles, lack of resources such as internet access, difficulty with  
9 understanding school letters, or personal complexities in family life. The approach of CLD  
10 support workers to slowly develop trust, build relationships and arrange home visits to ex-  
11 plain the project proved to be successful. Through face-to-face conversations the CLD  
12 workers were able to arrange for consent letters to be signed and returned so that families  
13 could participate in the project. This proved to be a highly successful approach and pro-  
14 vided a means of breaking down some of the initial boundaries. As the project progressed  
15 some of the parents who participated in the programme activities such as the after-school  
16 homework club continued to seek opportunities to become involved by volunteering to help  
17 other parents to learn how to help their children. In addition to the involvement of CLD  
18 workers to support this parent group, teachers from one of the schools also agreed to be-  
19 come involved. These teachers planned to attend the group once a month to share strate-  
20 gies with parents and introduce curriculum developments.  
21  
22  
23  
24  
25

26 Teachers, CLD workers and parents levels of social capital increased as their relationships  
27 with one another progressed. The development of these relationships allowed teachers to  
28 gain understanding of the complex and wider issues influencing student attainment that  
29 need to be addressed before parents can prioritize literacy.  
30  
31

32 The development of social capital in these school districts was not limited to teachers but  
33 extended to school district staff such as community workers, parents, learning assistants,  
34 school psychologists, improvement officers, researchers and policy-makers.  
35  
36

### 37 *Building decisional capital through collaborative inquiry*

38

39 The development of decisional capital involves time, practice, feedback from peers and  
40 reflection (Hargreaves and Fullan 2012). Discussing decisions and rationale for judge-  
41 ments, observing other classroom teaching situations or teaching in the presence of peers  
42 provides opportunities to both practise decision making skills and discuss these decisions.  
43 Lesson Study provided the means for teachers in School District E to experiment both in-  
44 dividually and collectively with innovative approaches. The joint planning of the study les-  
45 son, the teaching or observing of the study lesson and the debrief of the study lesson was  
46 an ongoing process of collaborative feedback and reflection. Similarly, in School District F,  
47 as SfLAs practised both old and new skills, but in the company of colleagues where they  
48 were afforded opportunities to develop their decision making skills while also discussing  
49 and reflecting on these decisions with others.  
50  
51  
52

### 53 **Reflections on impact and professional capital**

54

55 One of the core purposes of building professional capital is to impact on student experi-  
56 ences and outcomes. While causality cannot be assumed it is worthwhile noting the per-  
57 formance of students who were involved with staff taking part in SIPP. In School District F,  
58 reading tests (Durham, CEM and Neale Analysis of Reading Ability, NARA) were used to  
59 determine the reading ages of pupils before and after the collaborative inquiry. Increases  
60

1  
2 in students' reading ages, interest, confidence, engagement and motivation in literacy  
3 were indicated by the data.  
4

5  
6 School District E's focus on using collaborative inquiry to improve learning and teaching in  
7 mathematics led to the contextualization and adaption of a mathematics programme to  
8 meet the specific needs of the school context and the individual students within the school.  
9 Student attainment was assessed using several methods including qualitative observa-  
10 tions which indicated that pupils were developing their own strategies for mathematical  
11 problem solving rather than being restricted to a set algorithm. Evidence was also collect-  
12 ed demonstrating gains in pupil enthusiasm, confidence, engagement, and motivation (au-  
13 thor 2015). Pre and post-tests also indicated an increase in attainment. It is worthy of not-  
14 ing that the mathematics programme and collaborative inquiry has now been adopted or-  
15 ganically by another SIPP partnership.  
16  
17

18  
19  
20 Where there have been challenges of limited time, funds and resources, most partnership  
21 teams have worked creatively to overcome impediments and implement their plans and  
22 sustain action. The pace of progress, unsurprisingly has been uneven with a minority of  
23 partnerships taking longer to put their ideas and plans in place. This has reflected variation  
24 in capacity within organisations, internal and external factors in the partnerships and their  
25 particular projects. Nevertheless, even where progress has been slower, important lessons  
26 have been learned not least because of the collaborative inquiry integral to the partner-  
27 ships. Such insights appear to be informing strategies to improve approaches in these  
28 partnerships. Examples of partnerships which appeared to have an impact on student at-  
29 tainment demonstrate the opportunities provided for teachers to develop their professional  
30 capital, but also the opportunities for other people within, between and beyond the school  
31 to build their professional capital.  
32  
33

34  
35  
36 The range of positive developments and associated impact demonstrate that the underly-  
37 ing principles for collaborative partnership working and inquiry to tackle educational in-  
38 equity are not misplaced. Indeed, progress and impact has been most evident in those  
39 partnerships that have been able to adapt and apply the principles and core concepts un-  
40 derpinning the SIPP to their own context and then share, learn and refine with others. Over  
41 the duration of SIPP there has been an increase in sharing of ideas and lessons learned  
42 across individual partnerships, across the wider programme and at times into national and  
43 international research and policy areas.  
44  
45

46 The OECD (2015) review of school improvement in Scotland identified SIPP as an impor-  
47 tant lever for change, describing the programme as a "*powerful national network focused  
48 on tackling educational inequity*" (p. 77). The review also noted the work of Education  
49 Scotland collaborating with local authorities and university researchers to support these  
50 partnerships and the commitment to professional learning at all levels within the system.  
51

52 The OECD cautioned against relying on bottom-up choices that "*can become fragmented  
53 and are not the only alternative to top-down improvisation of approved pedagogies*" (p. 228).  
54 One solution suggested by the OECD was for LAs to work more closely in partnership on  
55 issues of improving educational equity and building capacity through professional learning  
56 and that this can be achieved by strengthening the middle tier:  
57  
58

59 *We believe in reinforcing the "middle" through fostering the mutual support and  
60 learning across LAs, together with schools and networks of schools."*

(OECD, 2015, p. 111)

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

In our view, the SIPP partnerships are ‘proof of concept’ that disciplined collaborative inquiry based approach provide a sensible way forward for the Scottish education system. It would seem to us that the programme has played an important role in creating the conditions that might support the development of a Scottish Networked Improvement Community. Such a community could provide systemic coherence by operating within a set of agreed principles and broad framework, providing the flexibility necessary to develop approaches that meets the needs of specific contexts rather than generating a one size fits all model of change. Such a community would also strengthen the middle through continuous professional learning underpinned by disciplined collaborative inquiry.

Through our social network analysis we argue that SIPP has demonstrated that it is possible to build professional capital laterally across classroom, school and district boundaries involving educational professionals working with other public service workers in districts with civil servants and university researchers. Therefore, an expanded SIPP type approach has a potentially important role to play in responding to the recommendations set out by the OECD.

There are indications that SIPP is influencing developments more widely across the participating SIPP local authorities and that the programme also resonates with some local authorities within the Scottish Attainment Challenge, a national strategy launched in 2015 to tackle the attainment gap. However, to date the uptake is organic and without strategic coordination. If the potential of this approach is to be optimized the system will need to take a strategic perspective on how best to mobilise the appropriate actors within the system to build lateral ties that connect a diverse range of stakeholders.

### Commentary

Providing opportunities for the development of professional capital not only within and between schools, but also beyond schools suggests a means of reaching “*into the school from the outside*” (Ainscow 2016:2). Only then can schools begin to facilitate partnerships for the purpose of achieving more equitable outcomes and experiences for all students.

We have developed an argument that there may be a relationship between professional capital and collaborative inquiry-based approaches that promote educational equity. Further research is required to ascertain the nature, depth and robustness of this relationship. We also suggest that further research should also be undertaken that explores professional capital across professional contexts. We need to better understand the mechanisms, structures and processes needed to build professional capital across a range of service providers. To move from thinking about building teachers professional capital or educators professional capital to what is required and how to optimise the support for building professional capital across the public services [in more detail](#) will open up new possibilities for supporting the holistic development of our children from the most disadvantaged backgrounds.

The SIPP has tended to have most traction where a group of committed practitioners, supported by school and local authority leaders, were quickly established to drive the project and who have then been able to engage other staff and expand the influence of the Programme to affect behaviours more widely across schools and partnerships. This is challenging and complex territory but this type of work is crucial in developing a robust Scottish approach to move the education system forward.

As we write, coming to the end of a three-year programme we argue that our findings highlight the potential for disciplined collaborative inquiry to be a key lever for change within,

1  
2 between and beyond schools. Our wider experience of working in this area suggests that  
3 the evidence base for this is strongest within schools; it is developing between schools  
4 and is only emerging beyond schools. It would also seem to us that while the knowledge  
5 base about 'what works' and 'why' decreases as one moves away from classrooms and  
6 individual school settings, the potential for improvement increases as the focus shifts to-  
7 wards collaborative improvement efforts between schools and beyond schools. **Therefore,**  
8 **we suggest that that policymakers should be investing even more heavily in developing**  
9 **research and development interventions between schools and beyond schools as holistic**  
10 **place-based approaches to designed to generate collective impact (Henig et al. 2015) im-**  
11 **prove educational, health and wellbeing and ultimately the life chances of our most disad-**  
12 **vantaged children.**  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

## References

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12 Agryis, C. Putnam R. and Smith, D. (1985) *Action Science: Concepts, methods and skills for research and intervention*, San Francisco, CA: Jossey Bass

13  
14  
15 Ainscow, M. (2016), "Collaboration as a strategy for promoting equity in education: possibilities and barriers", *Journal of Professional Capital and Community*, Vol. 1 Iss: 2, pp.159 - 172.

16  
17  
18  
19  
20 Ainscow, M., Dyson, A., Goldrick, S. and West, M. (2016), "Using collaborative inquiry to foster equity within school systems: opportunities and barriers<sup>1</sup>", *School Effectiveness and School Improvement* , Vol. 27, Iss. 1. pp.

21  
22  
23  
24  
25 Ainscow, M. (2015) *Towards self improving school systems: Lessons from a City Challenge*, Rutledge: Oxon.

26  
27  
28  
29 Ainscow, M. (2012), "Moving knowledge around: Strategies for fostering equity within educational systems", *Journal of Educational Change*, Vol. 13 No. 3, pp. 289-310.

30  
31  
32  
33 Ainscow, M. , Dyson, A. , Goldrick, S. and West, M. (2012), "Making schools effective for all: rethinking the task", *School Leadership and Management* , Vol. 32 No. 3, pp. 1-17.

34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60

Alba, M (2016) Keynote address to the 29<sup>th</sup> International Congress of School Effectiveness and School Improvement, Glasgow, 8<sup>th</sup> January <http://www.educationscotland.gov.uk/video/i/icseiMarinievasAlba.asp> (accessed 10th March 2016).

Ball, S. and Junemann C. (2012), *Networks, new governance and education*, Bristol: Policy Press.

Bell, L., Bolam, R. & Cubillo, L. (2006), "A systematic review of the impact of school leadership and management on student outcomes" in: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Bryk, A.S., Gomez, L. M., Grunow, A. and LeMahieu (2015) *Learning to Improve: How America's schools can get better at getting better*, Boston, MA: Harvard University Press

Chapman, C. (2016) Networking for educational equity: Rethinking improvement within, between and beyond schools in Harris, A and Jones, M (eds) *Leading futures: Global perspectives on educational leadership*, Sage: London

Chapman, C. (2014), "From one school to many: Reflections on the impact and nature of school federations in England", *Educational Management Administration and Leadership*.

1  
2 Chapman, C. (2008), "Towards a framework for school-to-school networking in challenging  
3 circumstances", *Educational Research*, Vol. 50, No. 4, pp. 403-420.  
4

5  
6 Chapman, C and Hadfield, M (2010) Reconnecting the middle tier: Local authorities and school-  
7 based networks *Journal of Educational Change* 11, (3) pp. 221- 247  
8

9  
10  
11 Chapman, C., Lowden, K., Chestnutt, H.R., Hall, S., McKinney, S., Hulme, M. and Friel, N.  
12 (2015), "The School Improvement Partnership Programme: Using collaboration and inquiry  
13 to tackle educational inequity", Report to Education Scotland. Livingston. Education Scot-  
14 land.  
15

16  
17 Chapman, C., and Muijs, D. (2014) Does school-to-school collaboration promote school  
18 improvement? A study of the impact of school federations on student outcomes. *School*  
19 *Effectiveness and School Improvement*, 25(3), pp. 351-393.  
20

21  
22 City, E., Elmore, R., Fiarman, S. and Teitel, L (2009) *Instructional rounds in education: A*  
23 *networked approach to improving teaching and learning*, Boston, MA: Harvard Educational  
24 Press  
25

26  
27 Clauset, K.H. and Murphy, C.U. (2012), "Creating synergy: cycle of inquiry shifts learning  
28 teams into high gear", *Journal of staff development*, Vol. 33 No. 5, pp. 30–33.  
29

30  
31 Cochran-Smith, M. (2015), "Teacher communities for equity", *Kappa Delta Pi Record*, Vol.  
32 51, pp. 109-113.  
33

34 Cochran-Smith, M., & Lytle, S. L. (2009), *Inquiry as stance: Practitioner research for the*  
35 *next generation*, New York, NY: Teachers College Press.  
36

37  
38 Daly, A.J. (2010), *Social network theory and educational change*. Cambridge, MA: Harvard  
39 Educational Press.  
40

41 DeLuca, C. , Shulha, J. , Luhanga, U. , Shulha, L.M. , Christou, T.M. and Klinger, D.A.  
42 (2015), "Collaborative inquiry as a professional learning structure for educators: a scoping  
43 review", *Professional Development in Education* , Vol. 41 No. 4, pp. 640-670.  
44

45  
46 Drew, V., Priestley, M. and Michael, M.K. (2016), "Curriculum development through critical  
47 collaborative professional inquiry", *Journal of Professional Capital and Community*, Vol. 1  
48 Iss: 1, pp.92 - 106.  
49

50  
51 Dudley, P. (2015) *Lesson Study: Professional learning for our time*. London: Routledge.  
52

53  
54 Dyson, A., Kerr, K., Raffo, C., Wigglesworth, M. with Wellings, C. (2012) "*Developing chil-*  
55 *children's zones for England*", Save the Children: London  
56

57  
58 Earl, E. and Katz, S. (2006), *Leading schools in a data-rich world: Harnessing data for*  
59 *school improvement*, Corwin. ISBN-10: 1412906466.  
60

Fernandez, C. & Yoshida, M. (2004). *Lesson study: A Japanese approach to improving*  
*mathematics teaching and learning*. Mahwah, NJ: Lawrence Erlbaum Associates, Publish-  
ers.

- 1  
2  
3  
4 Fielding, M. (2001) "Students as radical agents of change", *Journal of Educational Change*, Vol. 2 No. 2, pp. 123–141.  
5  
6  
7 Fullan, M., Rincon-Gallardo, S., & Hargreaves, A. (2015), "Professional capital as ac-  
8 countability", *Education Policy Analysis Archives*, Vol. 23, No.15. [http://dx.doi.org/](http://dx.doi.org/10.14507/epaa.v23.1998)  
9 10.14507/epaa.v23.1998.  
11  
12 Hadfield, M. and Chapman, C. (2009), *Leading school-based networks*. Routledge: Oxon.  
13  
14 Hargreaves, A. and Shirley, D. (2012) "The Global Fourth Way: The quest for educational  
15 excellence". Corwin: Thousand Oaks: CA  
16  
17  
18 Hargreaves, A. and Fullan, M. (2012), *Professional Capital: Transforming Teaching in*  
19 *Every School*, Teachers College Press, New York, NY.  
20  
21 [Henig, J. R., Riehl, C. J., Rebell, M. A., & Wolff, J. R. \(2015\). \*Putting collective impact in\*](#)  
22 [context: A review of the literature on local cross-sector collaboration to improve education.](#)  
23 [New York, NY: Teachers College, Columbia University, Department of Education Policy](#)  
24 [and Social Analysis.](#)  
25  
26 Hopkins, D. (2012) Theories of Action for Teaching and Learning,  
27 [www.nrlcom.com/.../Theories-of-Action-Instructional-Rounds\\_PDH-HA](http://www.nrlcom.com/.../Theories-of-Action-Instructional-Rounds_PDH-HA)  
28  
29  
30 Hopkins, D., Ainscow, M. and West, M. (1994) *School Improvement in an ERA of Change*,  
31 London: Cassell  
32  
33 Hopkins, D., Ainscow, M. and West, M (1986) *Improving the quality of education for all*,  
34 London: David Fulton  
35  
36  
37 Kerr, D., Aiston, S., White, K., Holland, M. and Grayson, H. (2003), "Literature Review of  
38 Networked Learning Communities", NFER, NCSL commissioned research.  
39  
40  
41 Kerr, K. and West. M. (2010) *BERA Insight: Schools and Social inequity*, London: BERA  
42  
43 Matthews, J (2009) *Work hard be nice: How two inspired teachers created the most*  
44 *promising schools in America*, Chapel Hill, North Carolina: Algonquin Books  
45  
46 Menter, I., Elliot, D., Hall, S., Hulme, M., Lowden, K., McQueen, I., Payne, F., Coutts, N.,  
47 Robson, D., Spratt, J., Christie, D. (2010) "*Research to support schools of ambition final*  
48 *report*", Scottish Government: Edinburgh  
49  
50 Maden, M. (2003) *Success against the odds: Revisiting successful schools in disadvan-*  
51 *tagged areas*, London: Routledge  
52  
53 Moolenaar, N. M., Slegers, P. J. C., & Daly, A. J. (2011), "Teaming up: Linking collabora-  
54 tion networks, collective efficacy, and student achievement" *Teaching and Teacher Educa-*  
55 *tion*, Vol. 28, No. 2, pp. 251–262.  
56  
57  
58 Muijs, D., West, M. and Ainscow, M. (2010) Why network? "Theoretical perspectives on  
59 networking." *School Effectiveness and School Improvement*, Vol. 21 No. 1, pp. 5-26.  
60  
61 Muijs, D. , Ainscow, M. , Chapman, C. and West, M. (2011), "*Collaboration and Networking*  
*in Education*", Springer, London.

1  
2  
3 National commission on Education (1996) *Success against the odds: Effective schools in*  
4 *disadvantaged areas*, London: Routledge  
5  
6

7 Payne, C. M. (2008) *So little change: The persistence of failure in urban schools*, Cam-  
8 bridge, MA: Harvard Education Press  
9

10 Penuel, W., Riel, M., Krause, A. and Frank, K. (2009), "Analysing teachers' professional  
11 interactions in a school as social capital: A social network approach", *Teachers College*  
12 *Record*, Vol. 111 No. 1, pp. 124-163.  
13  
14

15 Rincon-Gallardo, S. and Fullan, M. (2016), "Essential features of effective networks in ed-  
16 ucation", *Journal of Professional Capital and Community*, Vol. 1 Iss: 1, pp.5 - 22.  
17  
18

19 Rowe, A., Chapman, C. and Mathers, N (2016) Stronger Communities in Action Paper  
20 presented to the 29<sup>th</sup> International Congress of School Effectiveness and School Im-  
21 provement, Glasgow, Scotland  
22  
23

24 Saito, E., Murase, M., Tsukui, A. & Yeo, J. (2014). *Lesson study for learning community: A*  
25 *guide to sustainable school reform*. London: Routledge.  
26  
27

28 Sammons, P. (2007) *School effectiveness and equity: making connections*, Reading: CfBT  
29

30 Smith, K. (2013) "*Beyond evidence-based policy in public health: the interplay of ideas*",  
31 Palgrave MacMillan, London  
32  
33

34 Snow, J.L., Martin, S.D. and Dismuke, S. (2015), "'We do more than discuss good ideas': a  
35 close look at the development of professional capital in an elementary education liaison  
36 group." *Teacher Education Quarterly*, Vol. 42 No. 2.  
37  
38

39 Stepanek, J., Appel, G., Leong, M., Turner Mangan, M., Mitchell, M. (2007). *Leading Les-*  
40 *son Study: A Practical Guide for Teachers and Facilitators*. Thousand Oaks, CA: Corwin  
41 Press.  
42  
43

44 Webber, R. and Butler, T. (2007) Classifying pupils by where they live: How well does this  
45 predict variations in their GCSE results? "*Urban Studies*" Vol 44 No 7 pp. 1229-1253  
46  
47

48 Wohlstetter, P., Smith, J., & Gallagher, A. (2013). New York City's Children First Networks:  
49 Turning Accountability on Its Head. *Journal of Educational Administration*, 51(4), 528-549.  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60