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# Collaboration and Networking Among Rural Schools: Can It Work and When? Evidence From England

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School-to-school collaboration as a school improvement method has grown in importance in England in recent years, and there is some evidence that such collaboration can have a positive impact on both capacity to change and student attainment. Most previous work in the area has focused on the urban context, however, despite the fact that increasing numbers of underperforming rural schools might benefit from collaboration. In this paper we examine the impact of collaboration using a quantitative reanalysis of rural school data from a previous study. We also discuss the conditions under which collaboration in rural areas is likely to be successful, using both reanalysis of rural data from a broader qualitative data set and primary data from telephone interviews. Findings show a positive relationship between collaboration on student attainment and highlight key conditions that need to be met, as well as particular difficulties of rural networks related to size and distance.

In recent decades, there has been growing interest in collaboration as a route to school improvement and reform, either through bottom-up activity or stimulated by national or local government. In England, such initiatives include the federations program, Networked Learning Communities, and chains of academies in which the same sponsor runs a group of schools.

Theoretically, there are a number of reasons why collaboration might be a successful school improvement strategy. Muijs, Ainscow, Chapman, and West (2011) identified four main theoretical positions advocating interorganizational collaboration and networking:

- 1. Constructivist organizational theory
- 2. Social capital theory
- 3. New Social Movements theory
- 4. Durkheimian network theory

According to constructivist theory, organizations are sense-making systems creating shared perceptions and interpretations of reality. This means that each organization will—to a certain extent—have its own unique perception of reality, albeit one that is anchored in its context. This sense-making function is essential for organizations to function effectively, but runs the risk of becoming myopic, in that this shared perception of reality may become closed to external influences. It is this myopia that can be addressed through networking with other organizations or other external partners that can provide access to a complementary cognition. Social capital

theory takes a more instrumental view, stressing the ways networking allows organizations to harness resources held by other actors and increase the flow of information in a network. "New Social Movements" is a term coined to describe the novel forms of social action (such as the environmental movement) that developed from the 1960s onward. These are seen as far more fluid than traditional social movements (such as trade unions), and are characterized not so much by single insurrections as by a series of events, and by organizations/people linked together in various more or less formal and transient patterns. Hadfield, Jopling, Noden, O'Leary, and Stott (2006) claim that networks of schools can be seen as such, displaying characteristics such as transience, complexity, and the need to build up new identities for the network that are distinct from those of the individual schools. The dominant role of activist leaders can likewise be seen in many school networks. This perspective seems most appropriate for networks that have developed bottomup through autonomous school action. Durkheimian theory, in turn, sees networking as key to combating anomie, which can result from a lack of strong ties as well as a disconnect between actors' ideologies and the behaviors they are forced to engage in-often a problem for schools facing challenging circumstances. All of these perspectives, then, suggest that collaboration and networking could benefit schools.

These theoretical perspectives also point to different goals for school network collaboration. The most obvious is that of school improvement: building capacity for change and ultimately improving student outcomes. However, this is by no means the only reason schools collaborate. For example, a renewed emphasis on multi-agency working has in many countries led to schools collaborating with each other and with external agencies to be able to provide a full service to pupils, addressing the social, health, and psychological needs of pupils in ways that would not be possible for individual schools (Cummings et al., 2007). Schools can also network, in the way businesses often do, to save material and staff costs, and to apply for funding through joint bids (Nooteboom, 2004), or for the provision of more effective and scalable Continuing Professional Development (CPD) activities (Hadfield et al., 2006). They may collaborate to gain greater political influence or as a mechanism for survival in the face of threats such as school closure for small schools (Muijs & Rumyantseva, 2014). It is clear that a pure school improvement orientation may therefore be too limited a viewpoint when discussing networking in schools.

As well as having different goals, school networks can be distinguished in terms of the timescale of activities undertaken. Activities undertaken by networks are highly varied. Nevertheless, some key distinctions have been observed in terms of activity timescales. Some network activities are essentially short-term "fixes," aimed at immediate issues of concern, but with little or no potential for longer term impact. Others are intended to bring about much more fundamental changes (e.g., changes in the school's culture or image), which may take several years to achieve or lead to noticeable impacts. Many strategies fall somewhere in between (e.g., a coordinated local strategy for inclusion, or setting up an action-learning set for headteachers), offering some combination of short-term impact and longer term development.

Of course, the extent to which these different strategies manifest themselves may vary, and it is not always clear how effective collaboration is compared to other school improvement strategies such as external intervention, buying into existing programs, or single-school reform efforts. However, in recent years there has been a growth in research on both the forms networking takes, and on the impact of collaboration and networking on student outcomes. In the United Kingdom, some evidence of impact comes from a systematic review of 14 studies carried out by the Networked Learning Group and the Centre for the Use of Research and Evidence in

TABLE 1
Distribution of Total Land Area and Population by Urbanicity

	Percentage total land area	Percentage total population
Urban	20.9	81.5
Rural—town and fringe	18.2	8.9
Rural—hamlet, village, and isolated dwelling	60.9	9.6

Source: Office for National Statistics, 2009.

Education (Bell et al., 2005), showing positive impacts on pupil outcomes in nine studies and positive impacts on teachers in 11. Nine studies reported whole school benefits, such as increased professional development or the emergence of a learning culture; the nine studies also reported positive impacts on parental involvement. More recently, Chapman and Muijs (2013, 2014) looked at types of federations, a particular model of school-to-school collaboration in the English education system (see Chapman & Muijs, 2013), and identified six types of collaboration:

- Networks where highly effective schools supported weaker schools for school improvement purposes
- 2. Networks where small schools collaborated to share resources, broaden curriculum, and ensure survival
- 3. Networks in which schools collaborated across phases (e.g., primary and secondary schools) to ensure smoother transitions across these phases
- 4. Networks of schools with a similar ideology or worldview, such as Catholic schools
- 5. Networks in which mainstream schools collaborated with special schools to improve inclusion and provision for students with special educational needs
- 6. "Academy chains" where schools similar to charter schools in the United States are run by a single sponsor

Chapman and Muijs (2013, 2014) also looked at the impact of the networks on student outcomes in the national General Certificate of Secondary Education (GCSE) examinations, and found a positive relationship between being part of a network and attainment, especially among networks of highly effective and weaker schools. Muijs (2013) found similar positive effects in primary schools.

## **RURAL SCHOOLS IN ENGLAND**

Most research on networking and collaboration in England<sup>1</sup> to date, including the studies mentioned earlier, has focused on schools serving disadvantaged urban communities that may face severe pressure from accountability systems demanding improved performance. Little attention, however, has so far been paid to collaboration between schools in rural areas. In part, this reflects the demography of the country. England is densely populated and predominantly urban. As seen in Table 1, over 80% of the population live in areas classified as urban.

<sup>&</sup>lt;sup>1</sup>The four parts of the United Kingdom—England, Scotland, Wales, and Northern Ireland—each have separate education systems, so we refer to England in this paper because this is where the research reported on took place.

TABLE 2
Rural Sample Compared to Original Sample

	Sample total, percentage schools	Rural sample, percentage schools
Cross-Phase	35.1	38.7
Performance	15.6	12.9
Size	18.8	32.2
Mainstreaming	4.6	0
Faith	14.8	16.1
Academy chain	2.3	0

Source: Author's analysis of data.

This focus on urban schools is also a reflection of a perception, widespread in English culture, of a "rural idyll" where strong, prosperous, rural communities support local schools that do not suffer the problems of social disadvantage that exist in urban areas (Cloke, 2003). Recently, however, this perception has been challenged. Although student outcomes and school effectiveness in many of the country's large urban areas, such as London and Manchester, have improved, some of the smaller towns and rural counties are underperforming, particularly in terms of the education of disadvantaged students. Recently published government statistics, for example, show that the 20 local authorities (or school districts) with the lowest performance in the national examinations at the end of compulsory education (GCSE) include eight that fit within the two rural classifications in Table 1 (Paton, 2014). This is a number disproportionately large relative to their share of the population. Rural schools also confront some specific challenges, such as limited aspirations, with rural youth often perceiving less of a relationship between education and work than do their urban peers, and exhibiting a stronger attachment to place that makes them less keen to move to higher education institutions that are often in larger cities removed from their area (Baker, 2013). Rural youth are less likely to participate in postcompulsory education and training than urban youth, when canceling out the impact of socioeconomic status, although there is some evidence that increased provision of vocational pathways can lead to greater postcompulsory participation (Johns, Kilpatrick, & Loechel, 2004). In some rural contexts, a feeling of disconnection and anomie may be present due to remoteness from central local authority and district systems and from alternative centers of expertise such as higher education institutions, which is amplified by the imposition of central government policies that are often geared toward urban issues and take little account of the specificity of rural contexts (Association of Teachers and Lecturers, 2008). The remoteness of rural schools from central services can be a particular problem when addressing issues of inclusion, as the often small schools may lack the resources (e.g., trained staff, materials, funding) to address the special needs of particular groups of pupils (Sze, 2004). Of course, the category of rural schools is in itself problematic, with rural areas ranging from ex-urban prosperity to impoverished former coalfield areas, so any generalization must be treated cautiously.

Nevertheless, these findings do suggest that collaboration and networking may be particularly valuable for rural schools, both to ensure that resources are accessed and to help address the problem of low performance in some rural areas. In this paper we therefore seek to address the following questions:

- 1. What forms of collaboration and networking exist in rural schools in England?
- 2. What is the impact of collaboration and networking in rural schools on student outcomes?
- 3. What factors are associated with successful collaboration in rural schools in England?

To look at these research questions we employed a mixed methods approach using reanalysis of secondary data and collection of primary data, including interviews and site visits.

### **RESULTS**

# What Forms of Collaboration and Networking Exist?

The original federations study identified six types (Chapman & Muijs, 2014):

- Cross-phase federations consisting of two or more schools of different phases (e.g., elementary and high school)
- Performance federations consisting of two or more schools, some of which were highperforming and others low-performing
- Size federations consisting of two or more very small schools or a very small school and a medium-sized school
- Mainstreaming federations consisting of one or more special schools and one or more mainstream school
- Faith federations consisting of two or more schools of the same denomination
- Academy federations consisting of two or more academies (similar to charter schools), operated by the same sponsor within a federation or chain

We compared the sample overall with the new sample of rural schools in Table 2.

What is clear from Table 2 is that rural federations were a lot more likely than federations as a whole to be "size federations" (i.e., networks of small schools) and slightly more likely to be cross-phase or faith federations. This mainly reflects the nature of rural education, which contains significantly more small schools but also a larger proportion of, in particular, Church of England denominational schools. Two of the five case studies consisted of small schools, and school size was mentioned in both as a key reason for federating. One headteacher, for example, noted the need for scale: "An issue for us is size; we are small, one or less form entry schools here, with all the financial and other constraints that brings with it. Really, to be sustainable, to thrive, we need to collaborate, and that's why we did this."

The size and remoteness of the area was mentioned by a deputy headteacher in one large network of 11 schools, where schools felt remote from the local authority and perceived their support as overly limited: "I come from the Southeast, where everything is close together. London is just down the road. We don't have that here, things are not on hand, so it is important for us to develop collaboration between ourselves, and make sure headteachers meet as a group."

However, size and area were not the only reasons for networking mentioned in the case studies. Just as in more urban areas, opportunities for school improvement and enhancing student

outcomes may be the key motivator. "Well, really we started to work together because school X was underperforming, and, both from a sense of moral purpose to help the whole area, but also with a nudge from the [local authority], we formed this thing to support their school improvement," said a deputy headteacher. In this collaboration a successful school was supporting a failing school in the same district, a form of collaboration found to have potentially positive impacts on student outcomes (Muijs, 2013).

Resource sharing was also an important reason for collaborating, as in this example from a middle manager in a federation of secondary schools: "We can't do it all. We can't offer the broad curriculum, both the vocational and the academic, and here in the area that is a problem, because we have a kind of dual economy, on the one hand the commuting middle classes, on the other hand tourism. So, we share resources in different curriculum areas." The issue of size was also present in terms of staffing, as mentioned by a deputy headteacher: "Of course, what we get when we are small is that you can have subject teachers who are literally the only person teaching the subject in a school. That can be a problem in terms of professional development, so working with others allows that person to interact and learn with others in his subject." Schools also felt they could rarely rely on central or district services for support, as noted by a headteacher: "We are in a large county, and the [local authority] is in X. So, we don't really see or hear from them often, and that has just become worse with the cuts, so really we need to do it ourselves." This remoteness was also felt when it came to central government, a powerful actor in the centralized English state: "We are kind of at the periphery here," said one headteacher. "The money, the resources, it goes to the cities, London, Manchester. .. but we face challenges here too, and that is often forgotten."

Overall, the findings demonstrate that rural networks are, like their urban counterparts, diverse. They are formed for a variety of purposes and motivations, but tend more often than urban counterparts to form as a result of size and location constraints.

# What is the Impact of Collaboration on Student Outcomes?

In order to examine the second research question, we compared federations with their nonfederated counterparts. Results are shown in Tables 3–5. As is customary in multilevel models, we start with an empty model showing the variance in pupil outcomes explained by being part of a federation.

As shown in Table 3, between 16% and 20% of the variance in pupil outcomes is situated at the school level with the remainder at the pupil level, a finding similar to those for the sample as a whole (including urban schools).

In the second model we added student-level predictors. Table 4 shows that pupil intake characteristics explain a significant proportion of variance in pupil attainment at both the school and pupil levels. Overall, they explain up to 14% of pupil-level variance, and up to 38% of school-level variance, demonstrating that much of the difference in performance between schools is down to differences in their intake in this sample. The main predictors of outcomes were prior attainment at Key Stage 2, the end of primary school, as measured by national tests in English and mathematics; measures of social background (e.g., eligibility for free school meals [FSM] and Income Deprivation Affecting Children Index [IDACI] score, an area-based indicator of child poverty); and being identified as having special educational needs (with School Action being the least severe category, School Action Plus as a middle category, and Statemented being the

TABLE 3 Empty Models From Founding Year to Five Years After Founding of Federation

	Year of foundation Coefficient (std error)	Year 1 Coefficient (std error)	Year 1 Coefficient Year 2 Coefficient Year 3 Coefficient (std error) (std error)	Year 3 Coefficient (std error)	Year 4 Coefficient Year 5 Coefficient (std error)	Year 5 Coefficient (std error)
Constant Percentage variance level 2 (school) Percentage variance level 1 (pupils)	3.84 (0.21)	4.85 (0.40)	4.12 (0.34)	4.35 (0.30)	3.94 (0.29)	4.26 (0.38)
	16.9	18.2	17.5	17.3	19.7	19.3
	83.1	81.8	82.5	82.7	80.3	80.7

Source: Author's analysis of data.

	Year of foundation Coefficient (std error)	Year 1	Year 2	Year 3	Year 4	Year 5
Constant	3.75 (0.24)	4.58 (0.38)	4.24 (0.35)	4.09 (0.30)	3.51 (0.28)	4.77 (0.39)
Eligible for FSM	-0.82(0.08)	-0.97(0.08)	-1.02(0.09)	-0.91(0.08)	-0.95(0.09)	-1.02 (0.10)
IDACI score	-3.14(0.18)	-3.57(0.21)	-3.65(0.21)	-3.39(0.20)	-3.55(0.22)	-4.10(0.24)
Male	-0.32(0.21)	-0.41 (0.20)	-0.40(0.21)	-0.38 (0.21)	-0.40(0.21)	-0.45(0.20)
School Action	-3.02(0.13)	-3.15(0.12)	-3.08(0.13)	-3.41 (0.14)	-3.28(0.14)	<b>-4.01</b> ( <b>0.16</b> )
School Action Plus	-3.11(0.18)	-3.24(0.18)	-3.37(0.17)	-3.26(0.19)	-4.01(0.21)	-4.20(0.19)
Statemented	-3.29(0.28)	-3.08(0.27)	-3.14(0.29)	-3.41(0.28)	-4.36 (0.29)	-4.31 (0.30)
Non-White British	-0.24(0.57)	0.18 (0.59)	0.08 (0.59)	-0.21(0.56)	0.28 (0.52)	-0.06(0.58)
Prior attainment at	4.57 (0.94)	4.48 (0.93)	4.82 (0.95)	4.08 (0.99)	3.99 (0.99)	4.18 (0.96)
KS2						
Variance explained						
Level 2 (school)	30.6%	36.7%	37.7%	33.9%	35.0%	34.3%
Level 1 (pupils)	10.4%	11.5%	12.2%	10.8%	13.8%	13.6%

TABLE 4
Model With Student-Level Predictors Added

Source: Author's analysis of data. Note. Significant in bold. FSM = free school meal; IDACI = Income Deprivation Affecting Children Index; KS2 = Key Stage 2. Social Action, Social Action Plus, and Statemented refer to categories of special educational needs with Statemented as the most severe.

most severe<sup>2</sup>). Ethnicity was not significant, although it has to be pointed out that the sample was overwhelmingly White British.

The analyses reported in Table 5 show that students outperform their peers in matched nonfederation schools from the second year of federation. Being part of a federation explains between 9% (in year 2) and 22% of the school-level variation in pupil outcomes. In all cases the analyses controlled for student characteristics. These findings are similar to those in the sample as a whole, although the effect sizes are somewhat smaller.

# What Factors are Associated With Successful Collaboration in Rural Schools in England?

Of course, although we found an overall positive impact, it was not the case that this impact was uniform across federations. It was also clear from the case studies that a number of key conditions need to be in place for networking to be successful.

A key factor in all networks and collaborations is trust, and this was also true for the rural networks we studied. In some cases a high degree of trust was already present due to headteachers previously knowing one another and having worked together in the past, according to headteachers

<sup>&</sup>lt;sup>2</sup>In England, a pupil can receive support for special educational needs (SEN), defined as any condition that can cause difficulties in learning, along a graduated scale of intervention. Under School Action the student will receive additional support, for example, through different pedagogical approaches or through adult support, often from a teaching assistant. Under School Action Plus, the student will receive other support, such as from a speech therapist. Where this is not sufficient, the pupil can receive a SEN statement that specifies exactly what the child's needs are, how they should be met, and, where possible, what adaptations need to be made to the mainstream school environment.

TABLE 5
Model With Federation and Student-Level Predictors Added

	Year of foundation Coefficient (std error)	Year 1	Year 2	Year 3	Year 4	Year 5
Constant	3.88 (0.25)	4.62 (0.38)	4.28 (0.36)	4.14 (0.31)	3.62 (0.28)	4.68 (0.38)
Eligible for FSM	-0.79(0.08)	-0.96(0.08)	-1.05(0.09)	-0.95(0.08)	-0.95(0.09)	-1.02 (0.10)
IDACI score	-3.15(0.18)	-3.62(0.21)	-3.61(0.20)	-3.45(0.21)	-3.54(0.22)	-4.15(0.24)
Male	-0.33(0.21)	-0.44 (0.20)	-0.36(0.21)	-0.35 (0.21)	-0.40(0.21)	-0.43(0.20)
School Action	-3.09(0.14)	-3.17(0.12)	-3.10(0.12)	-3.38 (0.14)	-3.25(0.14)	-3.96(0.15)
School Action	-3.08(0.18)	-3.20(0.18)	-3.36(0.17)	-3.24(0.18)	-3.95(0.20)	<b>-4.17</b> ( <b>0.19</b> )
Plus						
Statemented	-3.25(0.26)	-3.05(0.27)	-3.08(0.28)	-3.43(0.28)	-4.21(0.27)	-4.21(0.28)
Non-White	-0.10(0.55)	0.15 (0.58)	0.05 (0.57)	-0.18(0.55)	0.25 (0.50)	-0.02(0.56)
British						
Prior attainment at KS2	4.49 (0.92)	4.46 (0.93)	4.78 (0.95)	4.08 (0.99)	4.00 (0.99)	4.10 (0.95)
Federation	0.324 (0.321)	0.408 (0.338)	0.49 (0.240)	0.651 (0.256)	0.812 (0.309)	0.816 (0.334)
Variance						
explained						
Level 2 (school)	1.1%	5.2%	9.4%	13.1%	21.8%	22.3%
Level 1 (pupils)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Author's analysis of data. Note. Significant relationships in bold.

interviewed. In one case, the headteacher of one of the network schools had previously worked in another network school. However, in other cases schools had been competing for students and it was necessary to develop trust from a relatively low base. In one network, relationships had largely been developed through action, in that working groups were formed that brought together not just senior leaders and heads but middle managers, thus developing the ties that can generate trust and collaborative working relationships.

Another important element of success was to establish clear goals and build in mutual wins at the outset. The latter was easier where the benefits were clearly material, as in one network where collaboration was initially set up around the provision of CPD following cuts in local authority capacity. According to one headteacher, "With the development of the shared CPD, it was pretty clear that we would all, as schools, benefit and be getting something that we wouldn't have on our own." In other cases this needed to be explicitly stated, not least toward other stakeholders, as was the case in one network where a high-performing school was supporting a weaker one. As a headteacher noted: "With governors, especially, we had to say, 'look, we are supporting, but there is something in it for us as well. I, as a headteacher can learn from doing this, and my staff can learn from supporting. This is great professional development!' They had to be convinced." The network needs to have clear goals if it is to be established, remarked a headteacher, "otherwise it just becomes a talking shop, and it will wither on the vine." All the successful networks engaged in specific activities: providing CPD, joint curricular resources, leadership development, sharing teachers, and so on. Collaboration was never just a feel-good activity: schools needed to collaborate on something. Where no specific action resulted from collaboration, it proved a waste of time for some interviewees. Remarked a deputy headteacher, "In my previous school

we were part of this network, but we never really did anything, as in actions. We would talk and share ideas, but at the end of the day it kind of died because you have more urgent things to do than just go to meetings." This was all the more the case in these rural networks, which face specific constraints that are not as important for their urban counterparts. For example, a specific constraint in a number of instances was distance. Although urban schools in networks are generally located quite close to one another, that is not so for their rural counterparts, who viewed it as a barrier to collaboration. As one teacher pointed out: "Doing anything really collaborative, like CPD or meetings, can be hard. As you know, roads aren't great so it can quickly take a lot of time to travel from one place to the next, and that does put people off, if a one-hour meeting take three hours out of your day."

Another constraint that some schools experienced was reluctance among parents and governors: "Because we are geographically separate villages, parents don't really see the point sometimes," noted a deputy headteacher. "We are a separate community from X, so what is the point in working with them, we can do it on our own." Again, this points to the importance of clear mutual benefits, which need to be built into the planning of the network.

### DISCUSSION

In this paper we have looked at collaboration in rural school districts in England, drawing on mainly secondary analyses of existing data sets. What these analyses show is that these collaborations both differ from and are similar to those in urban areas in a number of ways. A fundamental finding is that when looking at the impact on student outcomes, the possibilities for improved attainment appear to be present in both rural and urban networks. Therefore, the potential for collaboration as a school improvement mechanism is equally compelling in rural contexts. Of course, this is not to say that collaboration is a panacea or recipe for improvement. As we have seen, collaboration faces barriers and requires conditions in place that allow it to work, such as a minimum level of trust. We also know that other models of school improvement, such as self-improvement or partnerships with external organizations, can be successful (Hopkins, Stringfield, Harris, Stoll, & Mackay, 2014). However, in light of reported underperformance of schools in many rural districts in England, this is a significant finding and we would encourage both policymakers and practitioners to seriously explore ways in which rural networks can be encouraged.

We also find, as in urban areas, support for key theoretical models of improvement. These function in somewhat different ways in rural areas than in their urban counterparts, however. Thus, in terms of social capital theory, key aspects that appear in the case studies are the importance of size and location. Structural gaps appear because schools are often small, meaning they lack capacity both in terms of staff and material resources. Collaboration is then seen as a very practical way of overcoming these weaknesses. In terms of location, remoteness from central services was a problem for many of these schools, so collaboration was seen as key to plugging those gaps.

Interestingly, an issue that strongly came out of this study was that of collaboration as a way of combating anomie. Although this sense of alienation and a lack of ties is often discussed primarily in the context of urban inner-city deprivation, it was apparent here that schools often felt remote and alienated from both central government and their local district, considering themselves as part

of a *periphery*. Networking and collaboration were in many cases seen as providing an alternative to this sense of feeling peripheral.

Another perspective that was strongly present in these schools, and more so than in previous studies of collaboration in urban contexts in England (e.g., Chapman & Muijs, 2014; Muijs, 2013), was the sense that the schools themselves had set up and developed their own networks. This was the case in four of five case studies here, with only one being primarily "nudged" by the local authority, thus supporting the possibility of schools acting as voluntary movements as suggested in New Social Movements theory.

Overall, then, the evidence presented in this paper suggests that collaboration may be especially valuable for rural schools. It can help address some of their specific issues such as a lack of resources or scale, and may aid in raising standards and performance. Also, the study suggests that specific incentives may be needed to encourage collaboration and networking where there are constraints of distance or a lack of connection to what may be seen as culturally distinct areas or villages. These incentives could be financial, as was the case in the initial federations program in England, or could take the form of brokering with, for example, school districts playing a role in bringing their schools together. What is in any case clear is that both research and policy urgently need to attend more to the needs of these schools, overlooked as they often appear to be in favor or their urban counterparts.

#### **AUTHOR BIO**

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#### REFERENCES

- Association of Teachers and Lecturers. (2008). Poverty and social exclusion in rural areas: Position statement. Retrieved from https://www.atl.org.uk/Images/Poverty%20and%20social%20exclusion%20rural%20areas%20PS%202008.pdf
- Baker, S. (2013, June 20). Rural A-level students "much less likely" to go to university. *Times Higher Education*. Retrieved from http://www.timeshighereducation.co.uk/news/rural-a-level-students-much-less-likely-to-go-to-university/200 5005.article
- Bell, M., Jopling, M., Cordingley, P., Firth, A., King, E., & Mitchell, H. (2005). *Systematic research review: The impact of networks on pupils, practitioners, organisations and the committees they serve*. Nottingham, England: National College for School Leadership.
- Chapman, C., & Muijs, D. (2013). Collaborative school turnaround: A study of the impact of school federations on student outcomes. *Leadership and Policy in Schools*, 12(3), 200–226.
- Chapman, C., & Muijs, D. (2014). Does school-to-school collaboration promote school improvement? A study of the impact of school federations on student outcomes. *School Effectiveness and School Improvement*, 25(3), 351–393.
  Cloke, P. J. (Ed.). (2003). *Country visions*. Harlow, Essex, England: Pearson/Prentice Hall.
- Cummings, C., Dyson, A., Muijs, D., Papps, I., Pearson, D., Raffo, C.,... Todd, L. (2007). Evaluation of the Full Service Extended Schools initiative: Final report (Research Rep. No. RR852). Retrieved from the Internet

- Memory Foundation, National Archives website: http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/RR852.pdf
- Hadfield, M., Jopling, M., Noden, C., O'Leary, D., & Stott, A. (2006). What does the existing knowledge base tell us about the impact of networking and collaboration? A review of network-based innovations in education in the UK. Nottingham, England: National College for School Leadership.
- Hopkins, D., Stringfield, S., Harris, A., Stoll, L., & Mackay, T. (2014). School and system improvement: A narrative state-of-the-art review. School Effectiveness and School Improvement, 25(2), 257–281.
- Johns, S., Kilpatrick, S., & Loechel, B. (2004). Pathways from rural schools: Does school VET make a difference? International Journal of Training Research, 2(1), 55–75. Retrieved from http://jtr.e-contentmanagement.com/archives/vol/2/issue/1/article/3449/pathways-from-rural-schools
- Muijs, D. (2013, August). School-to-school collaboration. Paper presented at the European Association for Learning and Instruction conference, Munich, Germany.
- Muijs, D., Ainscow, M., Chapman, C., & West, M. (2011). Collaboration and networking in education. Dordrecht, Netherlands: Springer.
- Muijs, D., & Rumyantseva, N. (2014). Competition in education: Collaborating in a competitive environment. *Journal of Educational Change*, 15(1), 1–18.
- Nooteboom, B. (2004). Inter-firm collaboration, networks and strategy: An integrated approach. New York, NY: Routledge.
- Office for National Statistics (2009). 2009 Middle Layer Super Output Area Mid-Year Population Estimates. London: HMSO.
- Paton, G. (2014, June 19). Worst towns for GCSEs named in new league table. The Telegraph. Retrieved from http://www.telegraph.co.uk/education/educationnews/10912292/Worst-towns-for-GCSEs-named-in-new-league-tables.html
- Sze, S. (2004). Barriers to school success for students with disabilities in rural communities. Retrieved from ERIC database. (ED490349)