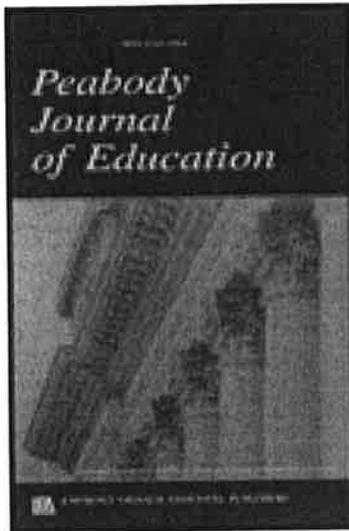


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Designing Rural School Improvement Networks: Aspirations and Actualities

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Designing Rural School Improvement Networks: Aspirations and Actualities

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Rural school educators are often isolated and have few opportunities to learn from neighboring schools or colleagues. This is an especially daunting challenge for low-performing rural schools faced with implementing significant reform efforts (e.g., turnaround approaches, educator effectiveness systems, college- and career-ready standards and assessments). This paper discusses the design and start-up of a large-scale project to connect “like with like” rural and remote schools within the northwest region of the United States to identify and share promising and innovative school reform practices. The authors present a network design framework based on previous work supporting and studying similar educational networks for innovation and improvement in the United States and beyond. They also present lessons learned about designing and launching a network that others might consider when initiating a school improvement network. ✓

In 1804 and 1805, Meriwether Lewis and William Clark became the first nonindigenous Americans to cross the continent from East to West in a single journey (Ambrose, 1996). They crossed the Great Continental Divide, traversing landscapes that still define vast swathes of rural America today. On their outward journey, Lewis and Clark forged effective communication and relationships with many Native Americans who welcomed the intruders into their midst, only to be betrayed one and two generations later, as they were forced from their lands into reservations to make way for settlers. Rural indigenous communities of North America still bear the scars of this tainted legacy. Other rural communities—agricultural market towns, mining and mill towns, small fishing ports, and logging communities—subsequently grew up around and among these first rural Americans and, sadly, sometimes displaced them. Although a few of these have prospered in recent decades through, for example, natural resource booms and second property ownership, others have shrunk. Agriculture became mechanized, manufacturers moved out, and

interstate highways passed by old staging posts. The trend for outward migration of families in search of wealth and professional opportunities undoubtedly puts a strain on the lives, livelihood, and leadership of those who remain.

One remarkable feature of Lewis and Clark's exploration was their shared leadership. At the time, shared leadership was considered to be ineffective. People felt it would confuse the lines of command, especially in moments of crisis, disagreement, or doubt. But Lewis and Clark cooperated. They enjoyed camaraderie. They made decisions together and distributed responsibilities for different groups and tasks. Leadership, in their case, was not the property and prerogative of a lone individual. Out on the frontier, in remote and challenging territory, the leadership of many people was needed, not just of one leader alone.

Today's rural schools and school districts can learn from Lewis and Clark's leadership example. Schools are geographically disconnected. Attracting good teachers to rural communities is extremely challenging. Keeping them in those communities is more challenging still. So too is connecting teachers across many different rural communities. One way to combat this isolation is by establishing professional networks of connected leaders that can support fellow teachers to succeed and also to stay in rural schools and communities.

This article examines a school improvement network that connects rural and remote schools and districts in the northwest region of the United States—spanning the states of Idaho, Oregon, and Washington. The network strives to build professional capital and enhance student engagement and achievement by undertaking joint action inquiry projects, sharing resources, and learning together. Members of the Northwest Rural Innovation and Student Engagement (NW RISE) Network include teams of teacher leaders, principals, and superintendents, in addition to state education agency staff. The NW RISE Network is in the early stages of development, yet important lessons are already arising that may inform other network start-ups. These lessons have been generated by analyzing archival data (e.g., meeting documents and summaries, debrief sessions, project evaluation data) to address the question: What are some key considerations for designing and launching a rural network spanning a large geographic area? //

THEORETICAL FOUNDATION

The design and early development of the NW RISE Network has been informed by literature related to the rural school context, professional capital, and education networks.

Rural School Context

Rural school contexts, like all contexts, have strengths as well as limitations (Budge, 2006). Bauch (2000) identified rural school assets that include strong parent involvement, close ties to churches, and partnerships with businesses and the broader community. Rural schools also have benefited from a clear sense of place and the ability to use it as a focus for the curriculum.

Despite these assets, rural educators are often faced with significant student and community needs. High rates of child poverty and geographic isolation contribute to trends in rural student outcomes, which include low educational aspirations, achievement, and attainment (Budge, 2006;

Irvin, Byun, Meece, Farmer, & Hutchins, 2012). Limited resources for educational materials, professional development, and technology (Howley, Wood, & Hough, 2011) also put rural schools at a disadvantage in attracting and retaining teachers (Monk, 2007) which, in turn, contributes to educators' sense of "cultural and professional isolation" (Bryant, 2007, p. 9). Other factors that contribute to educator shortages include low salaries and multiple-subject teaching assignments (Jimerson, 2005). All of these factors hinder rural educators' abilities to learn and grow professionally and to take on collective responsibility for improving their schools.

Qs?
Technology
+
Professionalism

Professional Capital

Whether rural, urban, or suburban, teachers are the most important within-school factor that impacts student learning and achievement (Sanders & Rivers, 1996). In this sense, they comprise what economists call human capital (Hanushek & Rivkin, 2012). In teaching, human capital refers to the individual talents, skills, and knowledge possessed by individual members of the profession (Odden, 2011). High-performing educational systems such as Finland, Singapore, and Canada are able to attract teachers with high human capital to the profession from the top 10% to 30% of the university graduation range (Auguste, Kihn, & Miller, 2010; Organisation for Economic Co-operation and Development [OECD], 2011). The United States, on the other hand, recruits most of its teachers from the bottom percentiles of the university graduation range and teachers in most poor, urban communities have weaker qualifications and minimal or no prior preparation.

However, there is more to the issue of developing high-quality teaching than human capital alone. Hargreaves and Fullan (2012) add two further kinds of capital—decisional and social—to make up what they term "professional capital." Decisional capital entails the capacity to make wise judgments in complex situations based on access to evidence and reflection on accumulated experience. Decisional capital appreciates in value over time if there is investment in leaders and colleagues to provide effective coaching, challenging, and stretching. Social capital is the circulation of knowledge, wisdom, expertise, and feedback in communities of high trust, effective collaboration, strong support, mutual assistance, and collective responsibility for all students' (and teachers') success. Strong social capital depends on working in environments characterized by high trust and low threat (Bryk & Schneider, 2002; Daly 2009). Working together, as well as merely talking together, is important for success (Little, 1990).

In one landmark study of 1,000 grade 4 and 5 teachers in New York City, Leana (2010) found that teachers with high social capital increased their mathematics scores by 5.7% over one school year compared to teachers with lower social capital scores. More than this, Leana found that although both human and social capital impacted student achievement, high social capital added value to existing human capital. Human capital or individual talent, however, did not add value to weak social capital.

Rural schools are challenged in all three areas of professional capital in terms of the ability to attract stronger talent than urban and suburban communities, to retain the best of that talent over time, and to conquer the tyranny of distance to build the social capital through which teachers can support and stimulate each other. The collective learning and action required to build and circulate professional capital is further endangered when teachers are the only ones within their grade level or subject area in their schools, burdened by multiple preparations across different

disciplines, and/or separated by hours from the next town or neighboring school. One way to surmount these problems is to create technologically supported professional networks.

Education Networks

Networks are not a new idea. Brain circuitry and ecosystems behave like complex networks (Capra, 2002). Elites have used networks of old school and family ties to procure and perpetuate advantage (Miliband, 1969), and resistance movements have employed networks to try to undermine such elites (Castells, 2012). Organizations operate as networks of information and communication (Davis, Sumara, & D'Amour, 2012), and teachers have network ties to greater or lesser degrees, especially in larger communities such as high schools (Lima, 2010; Siskin, 1994). Networks are not just ways to describe how people interact with others directly and indirectly in organizations, communities, and societies. They also describe deliberate efforts to articulate interactions among people in new ways in support of improvement, innovation, and implementation of change (Wellman & Berkowitz, 1988). Professional networks in education exemplify these deliberately designed architectures (Daly, 2010; Lieberman & Grolnick, 1996). ✓

Networks have different properties such as size, density, centrality, and range (Lima, 2010). One of the key issues is whether they have strong or weak ties among their members. Communities typically have strong ties among members where there are close and frequent interactions with high levels of relational trust (Bryk & Schneider, 2002; Etzioni, 1993). But Barry Wellman, one of the foundational theorists of networks, argues that in modern society, weaker ties of less intimate but more numerous interactions are more typical (Wellman, 1983). And, as Granovetter (1973) and then Little (1990) pointed out, weak ties can result in professional work that is undertaken and completed by people who can focus on tasks together without the prerequisites of strong friendship or close interaction that stronger ties presume. *Weak ties*

Hadfield and Chapman (2009) provide a conceptualization of three different kinds of networks. Hub-and-spoke networks are organized around a central hub where information is disseminated to participants on the periphery: university relationships with partner schools often take this form. Nodal systems comprise mini-hubs, as in schools that are clustered together by region, level, or focus to implement and give feedback on government policies and strategies. The most organizationally advanced network types are crystalline, with no recognizable hubs and interactions that occur across the network on multiple and overlapping pathways of communication.

Although networks benefit from having a clear focus or purpose, Castells (2004) is quick to point out that networks cannot be controlled; they can only be "disturbed" by giving them issues or agenda items with which to work. Bryk et al. (2013) contend that network activities should focus on evidence-based improvements. For others, however, the point of networks is to focus on "next practice" of innovation in the system, not just disseminating "best" practice in what already exists (Campbell, Lieberman, & Yashkina, 2014).

Networks, then, have increasingly come to be seen as a way to implement policy, improve practice, undertake innovation, and create community and system coherence that is different from traditional top-down policy alignment. With the right resources and supports, professional networks offer an especially promising strategy for schools and teachers who experience considerable isolation and find themselves distanced from readily available, traditional supports. It was ✓

with these considerations in mind that a rural school education network was established in the Pacific Northwest.

CASE EXAMPLE: NORTHWEST RURAL INNOVATION AND STUDENT ENGAGEMENT NETWORK

In 2012, the Northwest Comprehensive Center (NWCC) at Education Northwest conducted a series of needs-sensing meetings with state education agency (SEA) leaders in the northwest region (i.e., Alaska, Idaho, Montana, Oregon, and Washington) as part of an annual planning process for technical assistance services provided through a federal grant. Multiple states expressed needs to better support rural schools with their improvement efforts and to learn more from and with neighboring states. In response, the NWCC—working with partners at the Lynch School of Education at Boston College—helped SEAs design and initiate the multistate, multilevel NW RISE Network.

Network Design Process

In 2013, SEA teams worked through a network design process (see Figure 1). They first convened in early 2013 to develop a shared understanding of the project and to reach consensus on a theme. During this retreat, participants offered their greatest hopes for what could be accomplished through the network. Their comments ranged from a simple desire “to help build and support rural districts that don’t have the opportunity to work and connect together,” to “reduce isolation for teachers,” to grander aspirations of systemic change. One participant said, “I would like to have a model where the long-term purpose would be changing the national policy landscape to reform and improve schools: if we can create a model that works, we can turn the tide.” The SEA teams established a smaller design team, charged with creating a set of specific network architecture recommendations for the larger group to review and approve.

Network Architecture Design Elements

To facilitate and inform the work of the design team, researchers at Education Northwest and the Lynch School of Education at Boston College examined contrasting cases of a number of successful educational networks, including ones with which the Lynch School partners, Andy Hargreaves and Dennis Shirley, had direct research and development experience. This enabled the design team to deduce a set of higher order design elements necessary for the development and implementation of a successful educational network.

One example was the Alberta Initiative for School Improvement created in 1999 by the Alberta Teachers’ Association, the province’s teacher’s union, in partnership with the provincial government and other professionals such as school board superintendents (Hargreaves, Crocker, Davis, McEwen, Sahlberg, Shirley, & Sumara, 2009). It encompassed 95% of Alberta’s schools, and its purpose was to fund teachers and schools to develop bottom-up innovations to respond to local needs and to engage teachers in inquiring into and improving their own practice. Schools

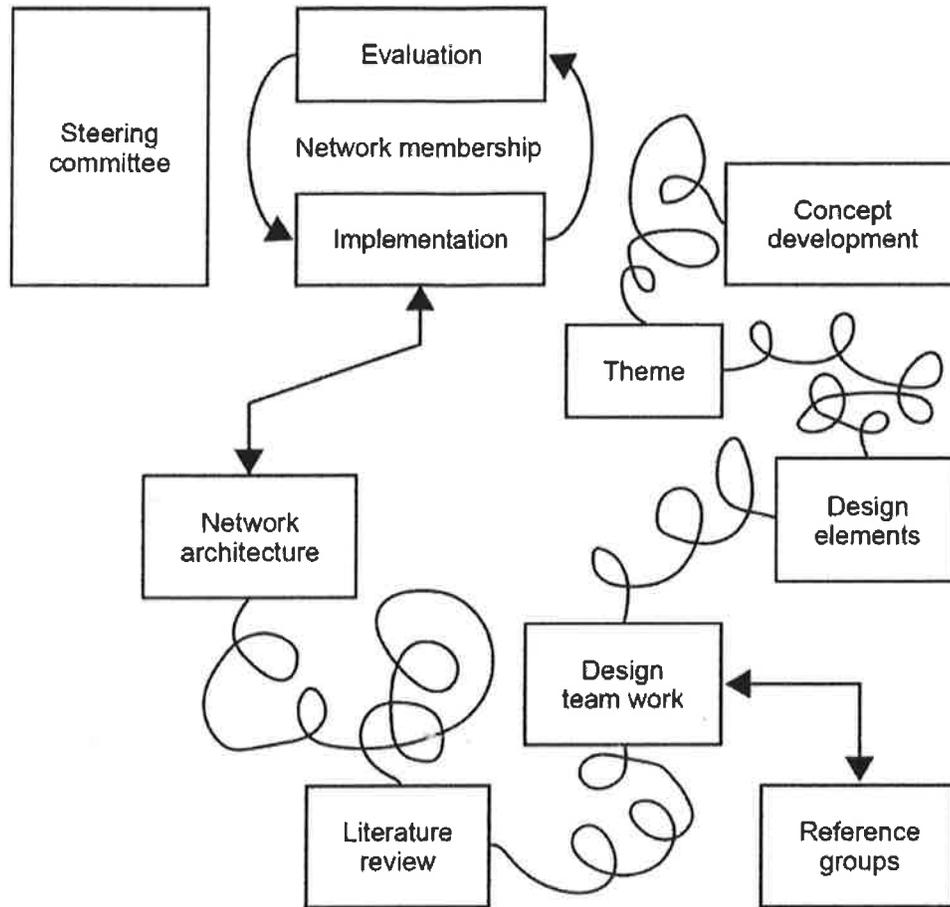


FIGURE 1 Northwest RISE network design process.

were required and incentivized to share their practices in a peer-to-peer system of transparent participation that included provincial or regional conference presentations. An online clearinghouse enabled colleagues to connect with others when they were working on similar issues.

A second example was an English-based network of 300 secondary schools that had experienced shortfalls in educational achievement and were networked with each other and with mentor schools in a lateral system to bring about improvement and success (Hargreaves et al., 2009). Overseen by a small steering group, the project granted voluntarily participating schools about \$15,000 per year to spend on improvement. Schools convened at national conferences to listen to inspirational presentations, receive training on using data to track student achievement and target areas needed for intervention, and connect with schools in similar contexts whose performance was superior to their own. Schools had opportunities to visit mentor schools (and vice versa) and were provided with a menu of short-, medium-, and long-term improvement strategies that many of the involved school leaders had found to be successful in their own experience. Also, schools had access to a data portal where these strategies were available and where they could

communicate with one another. Adopting this architecture of network-based change, two thirds of the schools improved at double the rate of the national average within 2–3 years.

In addition to what could be learned from these and other network architectures and their impact, we then turned to the existing literature on networks to further define and generate design team considerations for each of eight elements we identified as having importance. They are summarized below.

Shared Goals

It is important early on to articulate the desired outcome(s) for a network—what members hope to gain from participation, and what impact they hope to have as a result. This helps to establish a network’s identity, build shared ownership among participants, and develop a positive network culture. Hadfield and Chapman (2009) suggest that network members should:

[E]ngage critically and honestly with colleagues about what they want to achieve and the values on which this decision is based, and it requires them to be open about the current issues and problems they face in their schools, as there is no point in setting unrealistic and unachievable aims. (p. 25)

Site Selection and Participation

It is critical to consider how members will be selected to join. Sometimes, networks are established for enthusiastic innovators or for volunteer subscribers to a new program, pedagogy, or improvement strategy (e.g., Campbell et al., 2014). Conversely, schools may be “invited” to join a network of underperforming schools in order to raise achievement. According to Chapman and Hadfield (2010) there is a “dilemma between conscription and volunteerism” in which “those schools with potentially the most to gain may decide that networking is not for them” (p. 320), while those that overly depend on volunteers become overly selective in their composition and also burn out participants (Hargreaves, 2004). Whether participation is voluntary or compulsory, it is crucial for leaders to create an environment that makes participants want to join the network.

Form of Networking Activities

The form of network activities and interactions varies depending on the number of actors and their relationships or connections to other network participants, which can also change as the network evolves (Lieberman & Grolnick, 1996). The more educators interact with one another, work toward common goals, and develop innovative strategies to achieve their goals, the more likely they will be to develop collective responsibility for all students’ success (Hargreaves & Shirley, 2012). Leaders should also consider the kinds of learning relationships they want to develop in the network and be cautious about producing a “meeting” culture of clusters or nodes that are dedicated to implementing externally prescribed changes (Hargreaves & Fink, 2006). Significant benefits result from network activities that are properly organized and promote

genuinely lateral leadership, creation and dissemination of innovation, and effective morale-boosting collaboration, rather than just comprising an intermediary level for implementation of top-down change (Pennell & Firestone, 1996; Veugelers & O'Hair, 2005).

Focus

In addition to articulating a shared set of network goals, networks must decide what work members will undertake to achieve the goals (Day & Hadfield 2005). This amounts to selecting a clear focus for the network in terms of a particular aspect of improvement such as assessment for learning, improvement of literacy, or attending to students' mental health. Or, the network might focus on the needs of particular groups of students such as those with learning disabilities (Hargreaves & Braun, 2012). In line with the principles of educational change knowledge, some of the most effective networks are guided by high-priority local needs that are connected to, but not merely implementing, existing initiatives and priorities (Fullan, 2007).

Leadership and Network Steering

The development of effective networks depends on high-quality leadership that initiates, supports, and steers them over time as well as provides clarity, focus, and discipline in execution (Hargreaves & Fink, 2006; Hopkins, 2003). Hadfield and Chapman (2009) outline a number of practices that network leaders can demonstrate in order to develop leadership capacity among members of the network. These include demonstrating public support through words and actions; stretching leadership within organizations and across the network; promoting a culture of collaborative learning; bringing innovative ideas into their network; monitoring impacts and outcomes; and looking beyond their own network for imminent challenges or beneficial opportunities.

Leaders, collectively, should be able and know how and when to pull people into networking for change whenever they can by encouraging, inspiring, and enlightening network members (Hagel, Brown, & Davison, 2010); push people with the right combination of pressure and support into and through zones of discomfort when it is necessary and when pull strategies are not succeeding (Hargreaves & Fullan, 2012); and nudge the network forward through accumulated incremental actions on a continuous basis (Hargreaves, Boyle, & Harris, 2014; Thaler & Sunstein, 2008). Busher and Hodgkinson (1995) suggest that several leadership activities and principles are conducive to closer collaboration within a network such as use of rotating chairpersons and other administrative roles; active involvement and responsibility of staff at all levels; maintenance of ongoing relationships with the wider system; acknowledgment of potential sources of disagreement; and assigning as much responsibility as possible to the groups and teams closest to the relevant areas of practice.

Resources

Resource sharing epitomizes the underlying ideal of collectivism within a network. Participants can share the cost of products, services, and also risks. Muijs, Ainscow, Chapman, and West

(2011) claim that such sharing “is most likely to be successful where transaction costs (the cost of setting up and maintaining the network) are low and the benefits to individuals and organizations involved are high” (p. 9). Aside from material resources, including money, Internet connectivity, and physical space, external facilitators can contribute a great deal to the success of the network by “disturbing” the network with new ideas and strategies (Castells, 1996), and by bringing the network back to evidence-informed judgment as a basis for action and improvement (Bryk et al., 2013; Veugelers & O’Hair, 2005). Leaders can and should provide resources that create release time for participants to engage in network activity (Lieberman & Grolnick, 1996), ensure that educators are not overwhelmed with a profusion and confusion of networks to which they are supposed to belong (OECD, 2011), and connect the networks and their members to other relevant organizations and communities (Hadfield & Chapman, 2009).

Network Citizenship

To foster and sustain trust within a network, participants can establish clear expectations for member participation and accountability. Evans and Stone-Johnson (2010) found “that networking can be learned and that the presence of a support system for network leaders may enhance the effectiveness and quality of participation for both individual schools and the network at large” (p. 217). Networks are moving systems that can be reshaped or rebuilt by the actions and interactions of their members.

The selection of network protocols and tools should take into account the risks, limitations, and overall “dark side of networks” (Lima, 2010, p. 15). These include under- and over-participation, groupthink, vagueness of focus, slowness of pace in moving to action, lack of visible products or short-term benefits, and excessive efforts to secure top-down regulation of the network in its purpose, processes, and outcomes (Hargreaves & Fink, 2006; Lima, 2010).

Knowledge Circulation

The nature of networks is such that eventually they will start to supplant, rather than merely supplement, traditional hierarchical and bureaucratic decision-making structures (Castells, 2001). As a network develops and matures, central actors who have the most ties with other actors gain easy access to information and knowledge. They are able to communicate with others and take on increasing prominence compared to peripheral or isolated actors, who have limited ties and are either overly controlled by the center or disconnected from the work the network is doing (Daly, 2010). A significant challenge for a wider system that has sponsored a network is the moment when system-control from the center and the top needs to begin to cede resources and influence to the network itself (Hargreaves & Shirley, 2012; Leadbeater, 2000).

NW RISE NETWORK ARCHITECTURE

Over a three-month period, the NW RISE Network design team engaged in a facilitated process to consider the existing literature and a set of guiding questions for each of the eight design elements

outlined above. They discussed and eventually reached a set of recommended decisions for each element. Along the way, they gathered input and reactions from reference groups, or stakeholder groups with a vested interest in the network (e.g., other SEA leaders and rural educators). The larger group of SEA teams then reconvened to review the recommendations and arrive at a set of decisions about the preliminary network architecture.

Overall, they decided that the purpose of the NW RISE Network is to connect small, rural schools to provide educators with the opportunity to collaborate with colleagues in similar positions (e.g., second grade teacher, secondary math teacher) from other districts and focus on the challenge of teaching to new college- and career-ready standards in a way that is culturally and locally relevant and engaging for students. Teachers have the opportunity to build and circulate their professional capital by honing their professional practice through collaboration with colleagues within and among schools.

Meanwhile, participating school-, district-, and state-level leaders work to create supportive conditions for teachers to effectively collaborate and take purposeful action to improve student engagement and achievement. Specifically, the goals for participating SEA staff are (a) to increase their capacity to support and sustain networked communities as a strategy for supporting school improvement, and (b) to improve their ability to identify school improvement practices and tools to disseminate more broadly to schools across the state. The goal for administrators and educators is to develop and circulate professional capital and especially social capital through and beyond the network. Network leaders seek to promote professional capital that includes building trust and respect, sharing collective expertise, developing collective responsibility, and constructing frequent and meaningful inquiry and networking opportunities among teachers and schools.

The overarching goal for students is “engagement.” The design team identified three components of student engagement that prove especially important for students in rural communities: academic achievement, community attachment, and empowerment. A frequent assumption made by policymakers is that accelerated student achievement will lead to prosperity and success. In rural America, though, high-achieving students often migrate out to more populated cities and suburbs, creating what Carr and Kefalas (2009) call “rural brain drain.” To truly assist rural communities, educators must therefore focus on more than just academic achievement. Engagement must reach beyond the classroom to the wider community and the ways that students can identify with and connect to that community (Lawson & Lawson, 2013).

After deciding on the initial network design, three states (i.e., Idaho, Oregon, and Washington) recruited nine districts to serve as Cohort 1. The steering committee came together to review the network purpose and use the architecture to guide planning the network launch.

NW RISE Network Launch

The NW RISE Network activities were launched in February 2014. Network members—including school, district, state, and other education agency staff—began participating in a series of face-to-face convenings, held twice annually. Between convenings, participants engage in virtual meetings, which feature a variety of collaborative activities such as school-led webinars, asynchronous discussions, and joint role-alike projects.

Supported by states and guided by local educators to meet their most pressing challenges, NW RISE Network members learn from each other and share their collective expertise to ensure that all students receive the education they deserve. The steering committee regularly revisits the architecture to reflect on progress and refine decisions about the design based on ongoing assessment of the network activities.

EARLY LESSONS LEARNED

The NW RISE Network Steering Committee sees their efforts as groundbreaking, undertaking to formulate and run a cross-state network in a grassroots way for isolated, poorly resourced, and often neglected districts. Like Lewis and Clark, they embrace a “pioneer spirit,” acknowledging that there will be plenty of stumbling and opportunities to learn along the way. Steering committee members are purposeful in reflecting and using insights to improve the network in real time. Although the NW RISE Network is still in the early implementation phase, we have identified several important lessons from our first two years of work that could be helpful to others as they design and launch their own network efforts. These lessons learned were derived from meeting notes and evaluation data from all network, steering committee, and planning group meetings.

There is No Shortcut for Establishing a Shared Vision and Goals for the Network

Reaching consensus on the vision and purpose of a network spanning a large geographic region with several different policy priorities and other unique contextual factors requires substantial time, careful facilitation, executive sponsorship, and a core group of highly motivated and invested leaders with a high tolerance for ambiguity. An effective network has to be owned by the participants themselves. It cannot be borrowed or rented from a single model or exemplar that exists elsewhere and cannot be imposed to implement particular government priorities.

Recruitment, Especially for a Newly Formed Network, is Highly Dependent on Personal Communication and Trusting Relationships

State agency staff plays a key role in recruiting LEAs to participate in the NW RISE Network. According to one state agency staff member, who experienced great success in recruiting several districts to participate, “recruitment was personal.” She contacted superintendents with whom she had previously worked to share information, communicate the value of the opportunity, and explain commitments required. Those conversations were followed by formal invitations. One of the states had less success in initial recruitment of schools; one possible explanation is that they relied on a more impersonal approach using e-mail messages that advised “contact us if you are interested.”

Recruit Participants Who Share Some Key Commonalities

The steering committee noted early on that the first cohort of participants would need to find network activities highly engaging and relevant. Starting with similar schools with common characteristics and needs—in this case, rural single campus LEAs—is an attraction for participation. One steering committee member reflected that “it was limited to K–12 small, rural, and isolated [districts] . . . and we used that to lure them in.”

Resources Matter

The biggest challenge the design team and steering committee faced was finding the resources for travel and release time for school and district staff to participate in face-to-face network activities. At the outset, state agency staff agreed that some state-level support would be necessary. One staff member explained, “We believe the SEA needs to support the districts to participate The resources were the linchpin for the districts to be able to participate.” Each state was successful in securing resources from a variety of federal and state sources to support LEA travel to in-person convenings. In the design phase it is extremely important to involve SEA staff or other sponsors who have access to resources and can make allocation decisions. If the network is designed to meet needs that are important to decision makers, they will work hard to find the resources. At the same time, both SEAs and LEAs in the NW RISE Network believe that local entities must share responsibility for resources. According to one network member, “you pay for what you value.”

Provide Ample Opportunity for “Like” Participants to Collaborate

When asked what they valued most from the first two in-person convenings, participants’ strongest response was the ability to talk with colleagues who understand their own contexts and issues. For example, participants pointed out the value of “talking with other colleagues about issues we share” and to “[bond with] peers from other states.” Because the majority of participating teachers are the only instructors for a given grade level and/or subject area in their districts, they also find great value in role-alike group collaboration. One teacher expressed how the greatest value of the network was “meeting other grade-level teachers that have the same concerns I have.” Another was thrilled with “talking to people who do what I do.” Echoing this sentiment in closing reflections during the first convening, one teacher noted, “I don’t feel like a sole survivor on an island anymore.” One challenge the network faced with the first cohort of schools was the limited number of educators in some role-alike groups. To mitigate this difficulty, the steering committee decided to increase the number of schools and conduct purposive recruitment for particular grade levels and subject areas.

Structure Network Activities for High-Quality Collaboration

All NW RISE Network activities are designed to maximize real collaboration time, which leads to high levels of participant energy and engagement. Activities need to be directed by schools

and teachers as much as possible to be most meaningful and relevant; however, too much self-direction in the beginning stages can also be frustrating for participants. Using role-alike groups as a central organizing activity seems to be the most promising and worthwhile aspect of the network activities for rural schools. Participants value the time they have to work with role-alike colleagues, but not all of these groups have been able to identify a focus for their work quickly. Participants requested higher levels of support for this work in the beginning stages, such as sample action inquiry plans, sample strategies, and other tools. Network organizers can play an important role in providing just enough scaffolded support without being too constrictive or prescriptive and with an eye toward gradual release. It is important to monitor carefully, listen to what participants need, and adjust on an ongoing basis.

Steer and Disturb; Do Not Direct or Disown

Having a representative group of network members lead activities and make decisions creates high levels of ownership and ensures that the network is relevant and useful to all participants. The work of network leaders is made manageable and enabled by an entity—in this case, Education Northwest—that is willing to serve as a backbone for the network and attend to tasks such as facilitation and logistics. It is also enhanced by working with partners, such as university researchers, who can provide both appreciative and critical inquiry to support the network and help it achieve its goals. The introduction of outside ideas, multiple exemplars, evidence-informed practices, and exchanges with representatives from other school networks disturbs the network and offers specific insights and examples that serve as a springboard for the network's own platform for improvement and change. Network leaders and their partners can, in this sense, steer the network without micromanaging it and productively disturb the network without dissipating its efforts.

CONCLUSIONS

When Lewis and Clark led their expedition, three of the essential 19th-century skills of an American gentleman were cards, horsemanship, and dancing (Ambrose, 1996). The 21st-century skills required of today's leaders have no call for cards and little need for horsemanship, even if they could do more to revive the virtues of dancing. But, two key 21st-century skills—effective communication and facility with digital technology—are core requirements of modern professional networking and can enable today's pioneering educators to conquer the tyranny of distance and isolation that still bedevils many rural Americans more than 200 years after the opening of the frontier.

Networks are not unique to the world of professional educators or even all that new. However, there is greater awareness now of the core network properties and principles that underpin their operation and effectiveness and that define the varied forms that they can take. There is also a growing number of well-researched, clearly theorized, and evidence-informed examples of successful educational networks around the world that have had clear and positive effects on the diffusion of innovation and on the improvement of student learning.

The NW RISE Network is one example of a deliberately designed, evidence-informed network that aims to promote innovation, improvement, and implementation of educational change by building and circulating the professional capital of teachers who are otherwise isolated

from one another by geography. The network is intelligently informed by international evidence and examples of successful network development in education. However, these examples have not led to the imposition of a blueprint of network architecture on educators. Instead, the NW RISE network architecture has been co-constructed by educators in the region with the assistance, support, stimulation, and occasional disturbance of NW RISE facilitators at Education Northwest and research and development staff at Boston College's Lynch School of Education. This process of co-construction has built a platform of network design and operation that is uniquely configured to the needs and challenges of teachers and administrators in the region.

It is too early to detect what the impact of the network will be on innovation or achievement of the participants on any scale. Sustained success will depend not only on the effectiveness of the design, but also on the continuing availability of the resources that purchase time, leadership, and technological support. The lessons learned, however, are crucial at a time and in places that will rely more on networks and networking to build and circulate professional capital and diffuse complex initiatives and ideas across some of the most remote and, in professional and social terms, most isolating terrain in America.

What may prove essential for developing and circulating the professional capital of rural educators to prepare students for postsecondary education and careers may come to be seen as good for all teachers and their students. In this respect, the professional networking practices that are being hewn on the geographical frontiers of American education may be key in serving all of America's students—especially those who encounter and have to endure some of life's greatest inequities and injustices.

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