2015

Rethinking School Improvement: The Case for Networked Improvement Communities

Jesse Senechal
Virginia Commonwealth University, senechaljt@vcu.edu

Rethinking School Improvement:

The Case for Networked Improvement Communities

Jesse Senechal, Ph.D.
Metropolitan Educational Research Consortium
Virginia Commonwealth University

Spring 2015

Table of Contents

Introduction

Despite the heated debates that have surround K-12 school reform over the past several decades, there is a relatively consistent understanding across a wide range of stakeholders about the fundamental nature of the problem. Whether expressed by teachers, school leaders, policy makers, educational interest groups or educational researchers, at the heart of most school reform arguments are common concerns about student achievement, engagement and success especially in relation to differences in outcomes across racial/ethnic and socio-economic groups.

It is also the case that through the decades of reform, significant improvement efforts have been made at multiple levels of the system to address the problem of student achievement and achievement gaps. Policy makers at the federal, state, and local levels create rules and regulations that mandate or incentivize particular methods of school reform. Legions of educational researchers, working in a range of disciplinary traditions, conduct studies that articulate the depth of school problems and experiment with possible interventions. Outside organizations partner with schools to create both in- and out-of-school programs. And of course, everyday, across the country teachers and school-level leaders work directly with students, parents and communities to improve the outcomes of youth.

However, despite the generally shared understanding of the problems of public education and the significant efforts put forward to solve them, sustained improvement across our system of education has been elusive. While there are particular examples of improvement efforts that have transformed schools and had meaningful impacts on certain systems, these are the exceptions rather than the rule. Furthermore, attempts to scale up the successful cases has proven to be particularly challenging (Bryk, Gomez, Grunow, & LeMahieu, 2015). In general, any assessment of the system of education broadly over time suggests that the problem of low student achievement and achievement gaps between groups persist.

The Purpose of this Paper

The question of why school improvement efforts have not been as effective as we would hope is a complicated one that could be addressed from a number of perspectives. The purpose of this paper is to explore some of the underlying problems that prevent current school reform effort from achieving sustained impact, and to describe a promising model of school improvement, called the *Networked Improvement Community* (NIC). The NIC model – which has just started gaining traction in the world of K-12 school reform – establishes small inquiry groups within organizations to engage in cycles of improvement that involve implementing strategies designed to improve outcomes, collecting data on the effects of the strategies, reflecting on the data, and then planning next actions (Bryk, Gomez & Gunrow, 2010). In addition, the NIC model

supports the sharing of information about the effects of initiatives across networks (e.g. schools, school districts), and uses this shared learning to thoughtfully scale up successful practices. While the NIC model shares some principles and strategies with other popular school reform efforts, in its fully-realized form it represents a significant departure from the way that school improvement efforts have traditionally been approached. To some extent it is model that seems to have developed out of an understanding of both the strengths and the weaknesses of prior organizational improvement efforts.

This paper will be guided by three questions:

- What are the qualities of current school improvement efforts that have prevented them from achieving broad and sustained success across the system?
- What is the Networked Improvement Community model and how does it respond to the weaknesses of prior reform efforts?
- What are the key recommendations for integrating the Networked Improvement Community model into K-12 school improvement efforts?

Bridging Richmond

This white paper is supported by Bridging Richmond (BR), a regional partnership modeled after *StriveTogether*, a national network designed to promote regional, cross-sector collaborations around the cradle-to-career pipeline. Bridging Richmond's vision is that '*every person in our region will have the education and talent necessary to sustain productive lifestyles.'* To realize this vision, BR engages its regional partners from the education, business, government, civic, and philanthropic communities to (1) facilitate community vision and agenda for college- and career-readiness, (2) establish shared measurement and advance evidence-based decision making, (3) align and coordinate strategic action, and (4) mobilize resources and community commitment for sustainable change. BR's region includes eight school divisions (Richmond City, Chesterfield County, Henrico County, Hanover County, Goochland County, Powhatan County, New Kent County, and Charles City County) serving over 160,000 students.

Problems Inherent in Current Improvement Efforts

As suggested in the introduction, the difficulty of K-12 school improvement is not due to a lack of effort. For example, across the Richmond Region there are literally hundreds of independent programs and initiative that have "improving student academic outcomes" as a stated goal. Consider this very small sample of projects:

- ***Partnership for Achieving Successful Schools (PASS).*** PASS is a comprehensive support system led by the Virginia Department of Education's Office of School Improvement to provide high poverty rural and urban schools with technical assistance to improve historically low student achievement. This assistance includes on-site coaches to work directly with the principal and school leadership team (Virginia Department of Education, 2015). In the Richmond Region there are a number of schools that, due to poor academic performance, are mandated to use the PASS system for school improvement.

- ***Richmond Public Schools Academic Improvement Plan***. Similar to many districts across the region, Richmond Public Schools has developed an Academic Improvement Plan designed "to facilitate the acceleration of student progress for all student groups in Richmond Public Schools in meeting or exceeding targeted standards" (Richmond Public Schools, 2015). The plan proposes a number of strategies for reforming RPS policies that are based on the five themes of the ACT College and Career Readiness Benchmarks including curriculum changes, leadership development, and improved uses of data.

- ***Armstrong Freshman Priorities Academy***. The Armstrong Freshman Priorities Academy is an initiative that has emerged out of conversation among a group of community faith leaders on the east end of Richmond about how to promote success among students who enter high school several years behind grade level in math and reading. The program includes both academic interventions – extra math and reading instruction – as well as social supports that involve engaging with adult mentors from community organizations.

- ***Supporting Early Adolescent Learning and Social Success (SEALS) Program***. Virginia Commonwealth University is leading the SEALS program in a selected number of middle schools in Chesterfield County. The program which is funded through a research grant from the US Department of Education's Institute of Education Sciences, uses a professional development model to help 6th through 8th grade teachers support all students, including those who have difficulties and are at-risk for poor academic outcomes (Hamm et al, 2014). The goal of the program is to identify strategies and approaches that teachers can readily use in daily practice, and to disseminate these findings through scholarly journals.

- ***Schools to Watch (STW) Initiative***. STW is an initiative launched by the National Forum to Accelerate Middle-Grades Reform, an independent organization of researchers and practitioners interested in middle grades reform. The STW initiative supports middle grades school improvement processes with trainings and assessment systems that encourage (1) academic excellence, (2) a developmentally responsive curriculum and school culture, and (3) social equity (Schools to Watch, 2015). In the Richmond Region there is one school (Short Pump Middle in Henrico) with STW status, and several in Chesterfield that are about to embark on this improvement process.

The point of reflecting on these examples of school improvement is to highlight some of the problems inherent in this current scattershot approach to school reform. These problems include:

- ***Disconnect between improvement communities***. Each effort is led by a different improvement community working from a different position within the system. The examples above include efforts spearheaded by the Virginia Department of Education, Richmond Public Schools, Richmond's East End Faith Community, VCU's School of Education, and an independent National Network of Middle Grades School Reformers. While some efforts involve multiple stakeholder groups, the efforts are generally driven by ideas and energy of one community.

- ***Dispersion of expertise*****.** Within these improvement communities, expertise varies as well. In some cases these communities are composed primarily of district administrators and practitioners, in others they include researchers and scholars, in others community organizations, and in others policy makers. Although, we might be encouraged by the fact that all of these groups of experts are working on school change initiatives, it is rare to see true collaborations across these communities. When these communities of expertise do not connect, problems arise. For example theory-based education interventions that are not also built on a sophisticated understanding of school contexts are more likely to struggle to show impact.

- ***Inability to recognize the complexity of systems*****.** A closely related problem is the tendency for individual school improvement initiatives to understand the nature of problems from one level of a system and propose solutions that only attend to that level. For example, take the problem of student attendance. Low student attendance might result from lack of student engagement with a school's curriculum, lack of positive adult relationships, lack of accountability on parents, or unreliable transportation systems within a district. Any one of these ideas could be developed into a reasonable theory that may be used to inspire the development of a program. However, rarely are school improvement efforts designed with an understanding of the interrelated nature of these subsystems (e.g. curriculum and instruction, parental involvement, transportation systems).

- ***Overlap, competition and conflict among programs***. With a wide range of individual school improvement efforts happening at any given time within a school or school district, it is common for initiatives to be redundant, to compete for resources and time, or in some cases, be built on conflicting theories of action. For example, a district-level merit pay program that rewards individual teachers for improved performance on standardized tests, may discourage collaboration within professional learning communities that are built on the idea of sharing effective teaching strategies.

In combination, it is clear how these problems create conditions that contribute to the difficulty of sustaining school improvement across educational systems.

The Networked Improvement Community

With some of the problems of the current approach to school improvement in mind, this next section will describe Networked Improvement Community (NIC) as an alternative approach to school improvement. This section will include an outline of the general principles underlying the NIC model, and a description of the core components of a NIC.

What is a Networked Improvement Community?

Before beginning to define what a NIC is, it is worth clarifying the concept of a *network*. In a general sense, networks are social structures held together by channels of communication and based on a shared identity or interest. In education, networks are common. Some, like school-based departments (e.g., an English Department), are small and others are large (e.g., national professional organizations). Networks can be open in terms of their membership (e.g., curriculum resource website) or closed (e.g., Association of School Superintendents). In some cases networks serve primarily to facilitate communication about ideas (e.g., a reading group), and in others they can be mechanisms for organizing action (e.g., teachers' union).

A NIC is a particular type of network that is intentionally-formed with specific rules and norms of participation and with some defined improvement goal in mind (Bryk et al, 2015). NICs can also be understood as one form of *improvement science*, a set of approaches designed to facilitate innovation and the implementation of new organizational practices (Langley et al., 2009). The term Networked Improvement Community was originally coined by the software engineer and inventor Douglass Englebart. The model soon spread from the technology sector to other organizational settings, most notably health care (Bryk et al., 2015).

The translation of the NIC model to the field of education is a relatively recent development that has been spearheaded by the Carnegie Foundation for the Advancement of Teaching. Currently Carnegie is supporting several NIC initiatives around the country, and is working to adapt and promote the model for use throughout the K-12 community. The use of the NIC model in schools has also been promoted through Researcher-Practitioner Partnership grants from the US Department of Education's Institute of Educational Sciences. This line of grants is designed to promote the use Networked Improvement Communities, as well as other researcher-practitioner partnership models, such as Research Alliances and Design-based research (Coburn, Penuel & Geil, 2013).

The challenge of adapting the Networked Improvement Community model to schools

One of the goals of this paper is to suggest the relevance of the Networked Improvement Community model for K-12 schools. However, there are significant challenges to making the case, especially to those that are familiar with current school reform efforts.

First, the NIC model emerged from the field of organizational science and has been implemented primarily in the private sector as a method of product development and improving organizational efficiency. This is apparent when reading recent papers about the use of NICs in school improvement. For example, Bryk, Gomez and Grunow (2011) in discussing NICs as a potential method of school improvement lean heavily on examples from the semi-conductor industry. Although it has been common – especially in the current school reform climate – to apply private sector organizational models to public education, it is often a difficult translation that is – in some cases – met with skepticism at the local level. As many scholars and practitioners are quick to point out, schools are not businesses, students are not consumers (or products), and the organizational models used in one will not necessarily work well in the other without attention to the differences.

A second challenge – which may seem counter-intuitive at first – is that many of the core principles and methods of NICs are not necessarily controversial or unfamiliar to those that work in school improvement efforts (Lewis, 2015). For example, the coordinated inquiry teams of NICs have significant similarity with Professional Learning Communities (Barth et al, 2005), a very common improvement model that has been used for decades within schools. Or one might consider NICS focus on the use data to guide improvement as another form of "data-driven" instruction, an idea that is ubiquitous in K-12 education talk. The challenge this familiarity presents is that those that know schools may have the tendency to say, "we are already doing this," or "we have already done this and it didn't make much difference." That NICs, are not just a re-hashing of old ideas but, in fact, a radical departure from current approach to school reform efforts is a case that must be made to those that work within schools.

To explain the distinct nature of the NIC model and highlight its relevance to K-12 education, I will first outline six core principles that underlie the design of NICs and then explain how NICs work by discussing the school improvement activities that occur within the network.

Five principles underlying Networked Improvement Communities in schools

Below are five core principles that underlie the NIC model. Not only do these principles inform the design of NICs, but they are also useful in distinguishing the NIC model from other forms of school improvement. As you will see, many of these principles seem to be responsive to the problems of traditional approaches to school reform highlighted above.

Principle 1: The complexity of problems and solutions.
In contrast to traditional improvement efforts that tend to frame problems as having a single cause, NICS are based on the idea that organizational problems are rooted in complex subsystems that span various levels of organizational life, and interact in important ways with an array of contextual factors. From this perspective, working to solve a problem means understanding how problems – and solutions to problems – exist in multiple practices that occur not only at the ground level (e.g., in the classroom), but also within administrative systems (e.g., school and school district leadership) and in inter-organizational networks (e.g., community networks, state networks, policy communities). NICs are based on the idea that any theory about the causes of problems and possible solutions must give attention to this complexity.

Principle 2: Value of collective action.
As illustrated by the examples earlier, a number of programs within a school, school district, or region may all be working toward the same goal, but at the same time, overlapping, competing for resources, and – in certain cases – working at cross purposes. Lack of attention to the collective work of programs also often results in holes in services. NICs are based on the principle that improving outcomes in complex organizations benefits from the alignment of goals and activities across subsystems (Hanleybrown, Kania, & Kramer, 2012).

Principle 3: Bridging the divide between theoretical and practical knowledge.
In many school improvement efforts there is a tendency to privilege certain types of knowledge and devalue others. For example, it is often the case that scholarly theoretical knowledge carries more weight than the practical knowledge of teachers and building-level administrators. In these cases, the work of taking improvement "to scale" means implementing carefully specified protocols with fidelity. This approach often leads to skepticism among practitioners who may dismiss the "ivory tower" perspective of researchers, and put more value on practical "on the ground" experience. NICs are based on the principle that school improvement work must bridge this divide between theoretical and practical knowledge. Along these lines NICs are designed to engage in meaningful ways the generalized knowledge about interventions with the site-specific knowledge of practitioners (Lewis, 2015).

Principle 4: Rethinking the role of research.
Although the rhetoric around current school reform efforts often emphasizes the "evidence-based" or "data-driven" focus of the reforms, in practice the role of research and researchers in these efforts varies widely. While certain programs – especially those led by university-based researchers – are firmly grounded in research knowledge and practice (e.g. the SEALs program mentioned above), most programs either don't use systematic inquiry to evaluate and improve performance, or they conduct inquiry in ways that are wrought with technical problems that call into question the reliability and validity of the results. One of the principles underlying the NIC model is that school improvement processes must employ systematic methods of inquiry to improve the modes of delivery and to demonstrate effectiveness. This suggests the need to integrate

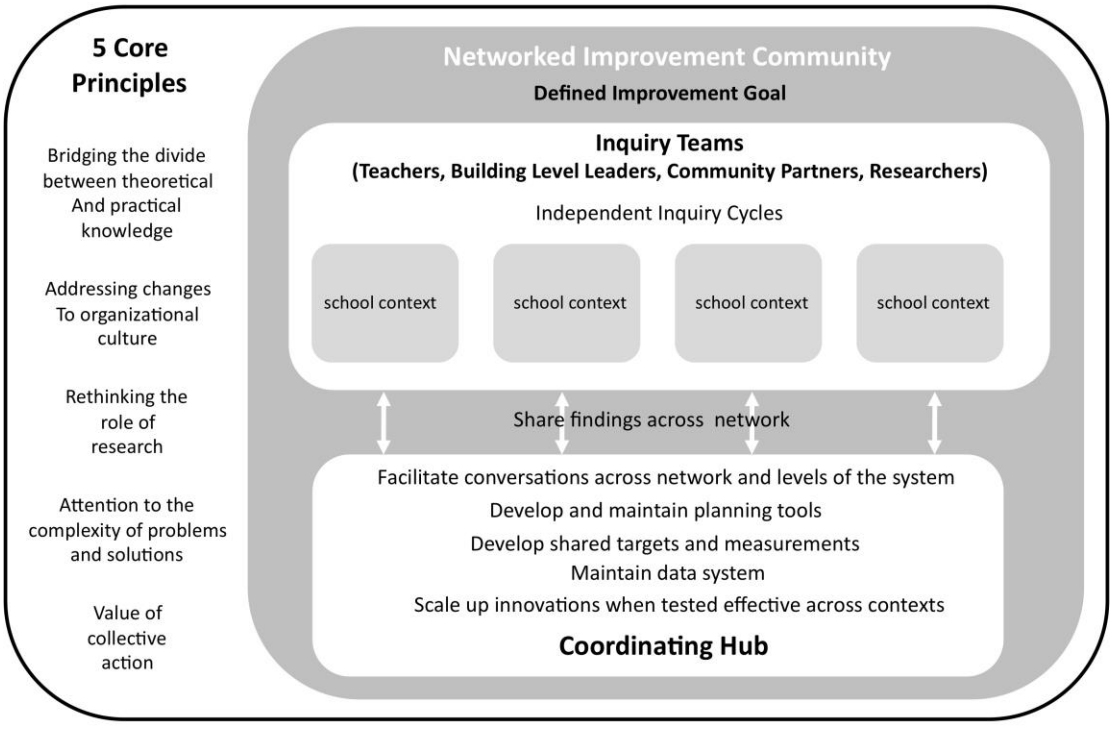
trained researchers into local school improvement efforts as well as building the capacity of practitioners and school leaders to conduct research.

Principle 5: Addressing changes to organizational culture.
Finally, NICs are based on the idea that the traditionally defined improvement communities (e.g. school-based practitioners, district leaders, policy makers, researchers) need to meld in ways that allow for communication and collaboration across groups. This involves not just creating spaces for dialogue, but also requires restructuring traditional roles and relationships (Coburn et al. 2013). For example, NICs might require researchers to think and act more like practitioners, and for practitioners to think and act more like researchers.

The Activities of the Networked Improvement Communities in Schools

With these principles in mind, the NIC model can be further elaborated through a description of the central activities of the network. Within NICs there are two types of organizing structures: (1) inquiry teams and (2) a coordinating hub. Below are detailed descriptions of the activities of these two organizing structures. Figure 1 is a diagram that illustrates the relationship between these components with the NIC model.

Figure 1. Networked Improvement Community



What are inquiry teams and how do they work?
Inquiry teams accomplish the majority of the work of a NIC. These teams work independently to implement strategies for improvement, research the impact of these

initiatives, and then share the findings across the network. Having multiple inquiry teams allows the network to understand how context affects implementation so that when initiatives are scaled-up there is attention in the design of the scale-up for variations across settings. Two important characteristics of inquiry teams are also worth mentioning: (1) guidelines for team membership, and (2) a standard inquiry protocol.

Guidelines for team membership
The membership of inquiry teams is established deliberately to ensure that the team has access to important knowledge – both about the general problem and the specific contexts where the work is occurring – and the practical skills necessary for taking action and evaluating the effectiveness of the action. For example to engage in action-oriented inquiry related to an issue like improving school attendance, an inquiry team might have teachers and counselors to bring the school perspective, representatives of community organizations that may have a better handle on out-of-school factors, school system administrators that may understand the logistical issues of school improvement, and university researchers who may bring research-based evidence as well as research skills to the team. It is also important to note that membership within these teams may shift overtime as the focus of the improvement work changes and the information-needs and skill-needs of the group evolve.

Inquiry cycle protocol
Another important characteristic of NIC inquiry teams is that they use a standard inquiry cycle that includes stages for planning, taking action, evaluation and reflection. This cycle of inquiry is almost identical to what is used in other research-focused school change models such as teacher action research (Pine, 2008) or design-based research (Coburn et al., 2013).

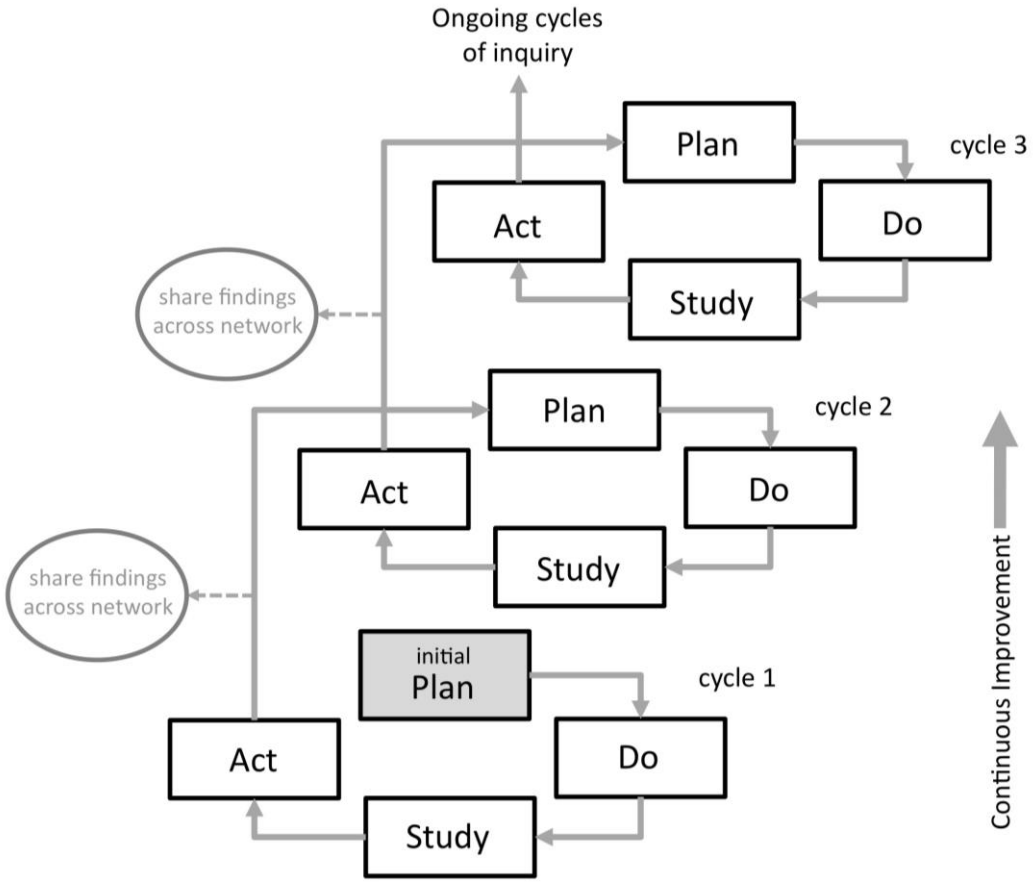
One articulation of the NIC inquiry cycle is PDSA (Plan/Do/Study/Act) (Bryk et al. 2015). Figure 2 presents an illustration of the PDSA cycle. At the ***plan stage***, the team uses network planning tools (e.g., program improvement maps and driver diagrams (see below)) to define possible actions, make predictions about what will happen if the action is taken, and design measurement tools for testing the predictions. When planning is complete, the inquiry team moves to the ***do stage*** where action is taken and data is collected to document the effect of the change and how the change was implemented. The team then moves into the ***study stage***, where the collected data is analyzed in relationship to predictions, and the ***act stage***, where – based on the findings from the cycle – the team decides what to do next. Decisions at this point in the cycle could include abandoning the action idea, making adjustments to the action, or possibly scaling-up the action.

There are several other points to make about the PDSA cycle that are useful for understanding what makes this process distinct from other improvement efforts.

- *Rapid cycles*. Unlike traditional models of educational research – which have long timelines of planning, data collection and analysis – PDSA happens in relatively rapid

cycles. The time it takes to complete a cycle depends largely on the nature of the actions taken and the frequency of the team meetings. In theory, a PDSA cycle could occur in a few days. For example, a school-based inquiry team could decide at a meeting on Monday to implement a new parent outreach strategy and design a measurement to determine impact, implement the strategy and collect data through the week, and then meet again on Friday to analyze the data and plan the next action.

Figure 2. PDSA cycle of inquiry



- *Formative learning*. Largely due to their rapid nature, PDSA cycles allow the learning that occurs to be iterative and formative in nature. Unlike other research and evaluation efforts that look at the summative impact of particular improvement efforts, the PDSA cycle feeds information back to those implementing programs on timelines that allow for regular adjustments to practice.

- *Practical measurement*. Traditional research efforts generally require the use of instruments (e.g., surveys, assessments) that have strong evidence of reliability and

validity. In contrast PDSA often uses locally developed practical measurement tools to assess the impact of actions. Although these less formal measurement techniques might be faulted for being less scientifically rigorous, they carry the advantage of being potentially more aligned to specific contexts, actions and targeted outcomes, as well as more relevant to local stakeholders.

- *Networked learning*. Finally, the NIC model is designed with the idea that the learning about the impact of improvement efforts developed by inquiry teams should be shared to build a collective understanding of improvement efforts across the multiple contexts that exist within a network. This last point suggests the need for facilitated communication at the network system level. This is the role of the coordinating hub which is discussed in detail below.

What role does the coordinating hub play?

As noted above, within NICs, the inquiry teams do the work of designing, implementing and studying improvement efforts. However, much of the value of the NIC model comes from the system-wide structures put in place to support these improvement activities and coordinate learning across the network. This system-wide structure is the *coordinating hub*. In practical terms, a coordinating hub within a NIC could be an individual or small group of individuals – depending on the size of the NIC. In a K-12 school setting, the coordinating hub could be an integrated department within a school or school district, however, it might also be established through an external partnering organization. For example, in the Richmond region, Bridging Richmond is serving as a coordinating hub for a multi-district / multi-school FAFSA (Free Application for Federal Student Aid) NIC initiative.

In some sense, the coordinating hub allows the potential impact of the NIC to be greater than the sum of its parts. One way of making this point is to explain the key roles that the coordinating hub plays within the network.

Facilitate conversations and learning across network and levels of the system.

If, as mentioned earlier, networks are social structures built on communication, it follows that the strength of a network would depend largely on the frequency and the quality of communication. In a NIC, the coordinating hub is the conduit for communication. Those that work in the coordinating role convene and facilitate meetings of system stakeholders and build the partnerships for ensuring the successful operation of the NIC. This role also involves developing systems for sharing learning across the network and across levels of the system. For example, the learning that occurs within a NIC might be focused at the practice level (e.g., classrooms), the administrative level, or the inter-organizational level.

Develop and maintain planning tools.

While NICs are comprised of multiple teams that conduct their inquiries in separate contexts, the networks are formed in response to particular problems and desired

outcomes. For, example, a K-12 NIC might focus on improving reading achievement among elementary school students or improving college access for underrepresented populations. One of the roles of the coordinating hub is to develop and maintain planning tools that allow for common understandings among network actors about the targeted problem and possible solutions.

One example of a planning tool is a *program improvement map*, a diagram that illustrates how an organizational problem is embedded across levels of a system (Bryk et al., 2015). The map allows the members of a NIC – who may only be familiar with particular parts of an organization – to understand the complexity of a problem, to determine where activity related to addressing the problem is occurring, and to develop ideas for interventions. Obviously a program improvement map is critical to the initial planning stages of a NIC, however, it is not static framework. As NICs move forward with their work and organizational learning develops, program improvement maps evolve.

Another commonly used planning tool within NICs is a *driver diagram* (Bryk et al., 2015). A driver diagram establishes the causal logic that connects possible solutions to the common understanding of the problem. A driver diagram allows the members of the NIC to see the causal assumptions that link agreed upon targets (e.g. improved attendance rates) with root causes (e.g. school-parent communications) and solution strategies that are assumed to impact root causes (e.g. enhanced parental out reach initiatives).

Develop shared targets and measurements

NICs are formed with a particular improvement goal in mind. One of the key roles of the coordinating hub is to work with the key stakeholders in a NIC to develop shared targets and common measurements related to the improvement goal. This allows the inquiry teams to measure their success against system-wide targets. Two points should be made about these shared targets. First, it is important that these targets are developed through a consensus building process that involves the input of key stakeholder groups across the network. Not only does this encourage the development of targets that are correctly gauged for the various contexts, but it also develops buy-in and understanding of the targets among the network actors. A second point is that the shared system-level targets are not meant to replace the various practical measurements that individual inquiry teams might develop to assess the impact of their initiatives in local settings.

Maintain Data Systems

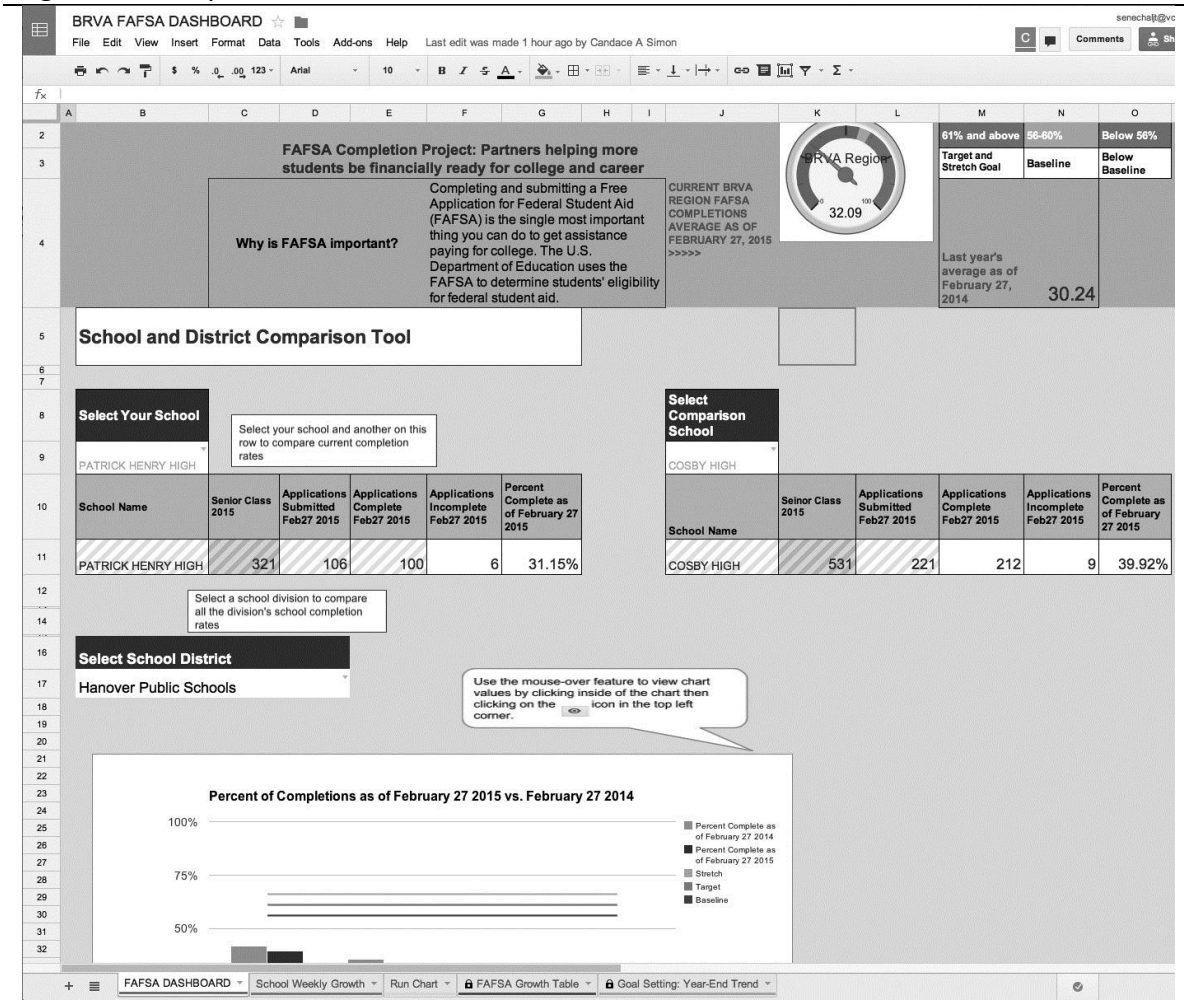
Like most current school improvement efforts, NICs rely heavily on data to drive planning and action. While it is hard to imagine an organization in this digital age that doesn't have a data system for tracking individuals and individual outcomes, the improvement work of NICs requires that these data systems be accessible, flexible, and reliable. One of the roles of the coordinating hub is to ensure that the data needs of the network are met. This may involve developing and maintaining data systems that allow inquiry teams to access system data for their improvement work. Figure 3 presents an

example of a dashboard created for the Bridging Richmond FAFSA Networked Improvement Community. Coordinating hubs are involved in establishing data sharing agreements between organizations (e.g., school systems and out-of-school programs).

Scale up innovations when tested effective across context

Finally, one of the critical roles of NIC coordinating hub is to provide guidance about when and how to scale up initiatives that have proven successful in individual contexts. This may involve sharing the learning about an innovation developed within one inquiry team with other operating teams; or it could involve expanding out to additional contexts and developing new teams to pilot and test the intervention in different settings.

Figure 3. Example of a data dashboard



Recommendations for Implementing NICs in School Improvement Efforts

The Networked Improvement Community model offers a promising approach to school improvement, but it is important to note that – when done well – it is a radical departure from typical school improvement practice that will require significant changes to the cultures of schools and other school improvement communities. For example, a move toward NICs will necessitate changing the ways critical actors (teachers, administrators, educational researchers) talk about problems and solutions, it will involve shifting the roles these actors play as they take action on issues, and it will require rethinking the allocation of time and material resources in the effort to improve the quality of education for youth.

What makes this shift especially daunting is that schools are notorious for being difficult organizations to change (Fullan, 2007; Sarason, 1990). Part of the reason for this is that schools are subject to so many externally mandated change initiatives that a significant percentage of the people that work within schools have become cynical about change and have taken to resistance. This resistance can range from outright refusal to adopt policy changes to unwilling compliance. In either case, the underlying approach is to "weather" rather than "embrace" the change, knowing that something new will be coming along in a year or two. Rarely, do staffs of schools take up new school improvement efforts with enthusiasm and buy-in.

With this challenging context in mind, below is a list of recommendations for implementing NICs in K-12 schools.

Creating space for the NIC.

As suggested throughout this paper, schools are inundated with improvement initiatives that take a variety of forms, come from multiple directions and often are not fully aligned to broad school improvement goals. The idea of layering NICs on top of this landscape of change does not make sense. If NICs are to be adopted as a school improvement strategy, they can not be perceived as one more thing to do. It is important that space is created within the organizational culture of the school for this work to happen. Members of inquiry teams need to be given time to plan, act and reflect. Resources need to be allocated (or re-allocated) to support the coordinating hub. This might mean thinning out or consolidating the improvement efforts within a school or district.

Advocating for flexibility in policy.

Creating the space for NICs also might mean advocating for flexibility within state mandated school improvement policies. For example, within Virginia, many schools – especially those schools that are most in need of improvement efforts – operate under

strict accountability measures and therefore have little control over the design of their improvement work. In these settings is highly unlikely that a NIC initiative would be successful.

Network leadership.

If NICs are to be successful within schools it is critical to have leaders that can serve as champions for these efforts. These leaders will not only need to understand the mechanics of the NIC as they organize and rollout the NIC initiative, but they will also have to have the ability to persuade others within the school settings of the value of the work.

Encouraging engagement with inquiry teams.

Part of the strength of the NIC model comes from tapping into the expertise and agency of local actors through the work of the inquiry teams. It is unlikely that forced participation in the inquiry groups will lead to the level of engagement needed to build a vibrant learning culture within the school organization. Rather than mandates, those that organize and lead networks need to develop incentives for participation. Incentives for members of inquiry teams might include control over choosing and defining problems to address and organizational recognition for creative excellence in the NIC work.

Negotiating the tension between structure and flexibility.

NICs are established with a clearly defined problem in mind and are guided by common outcome-based targets, however, they also require a meaningful level of flexibility within inquiry groups to develop ideas for interventions and test them across contexts with locally-developed practical measurement techniques (Lewis, 2015). If there is too much standardization of intervention and measurement across the network, the NIC loses its ability to respond to various contexts. On the other hand, if some parameters are not given to inquiry groups regarding the nature of the problem and the overall network goals, their work may lose focus and not lead to broad organizational learning. A balance must be struck between these poles.

Planning for network evolution.

As NICs are integrated into an organization, the nature and composition of the network changes. The early stages of NIC work require a large amount of energy invested in developing organizational understanding of the NIC model, building capacity within inquiry groups, and developing buy-in. As the NICs become more established, focus may shift to managing growth and building the capacity of the network across sites. Eventually, a NIC may evolve to a point where the practice of inquiry and the supporting structures become tightly integrated into the culture of the organization, making the role of coordinating hub less prominent. With this evolution in mind, it becomes important for those that organize and lead NICs to predict and plan for the shifting nature of the work.

References

Barth, R., DuFour, R., DuFour, R., Eaker, R., Eason-Watkins, B., Fullan, M., & Stiggins, R. (2005). *On common ground: The power of professional learning communities*. Bloomington, IN: Solution Tree.

Bryk, A. S., Gomez, L. M., & Grunow, A. (2010). Getting ideas into action: Building networked improvement communities in education. Carnegie Foundation for the Advancement of Teaching. Stanford, CA, essay, retrieved September, 15, 2011.

Bryk, A. S., Gomez, L.M., Grunow, A., & LeMahieu, P.G. (2015). *Learning to improve: How America's schools can get better at getting better*. Cambridge: Harvard Education Press.

Coburn, C. E., Penuel, W. R., & Geil, K. E. (2013). Research-practice partnerships: A strategy for leveraging research for educational improvement in school districts. William T. Grant Foundation, New York, NY.

Fullan, M. (2007). *The new meaning of educational change*. Routledge.

Hamm, J. V., Farmer, T. W., Lambert, K., & Gravelle, M. (2014). Enhancing peer cultures of academic effort and achievement in early adolescence: Promotive effects of the SEALS intervention. *Developmental psychology, 50*(1), 216.

HanleyBrown, F., Kania, J., & KraMer, M. (2012). Channeling change: Making collective impact work. *Stanford Social Innovation Review*, *20*, 1-8.

Langley, G. J., Moen, R., Nolan, K. M., Nolan, T. W., Norman, C. L., & Provost, L. P. (2009). *The improvement guide: a practical approach to enhancing organizational performance*. John Wiley & Sons.

Lewis, C. (2015). What Is Improvement Science? Do We Need It in Education?. *Educational Researcher*, *44*(1), 54-61.

Pine, G. J. (2008). *Teacher action research: Building knowledge democracies*. Sage Publications.

Richmond Public Schools, (2015). *Academic Plan*.

Sarason, S. B. (1990). *The predictable failure of school reform*. San Francisco: J ossey-Bass.

Virginia Department of Education (2015). *Partnership for Achieving Successful Schools*.