NETWORKS THAT CREATE A
SOCIAL IMPACT

REPORT 1

Networks for Social Impact
in Education Series

network
for Nonprofit and
Social Impact

TABLE OF CONTENTS

The Network for Nonprofit and Social Impact

The Network for Nonprofit and Social Impact at Northwestern University is a research lab. We are dedicated to discovering how organizations can better work together to move the needle on social issues. We thrive on projects that produce both rigorously studied results and practical applications for the social impact sector. Our work has been funded by the National Science Foundation, the Bill & Melinda Gates Foundation, and the Army Research Office in the past eight years. Our research is featured in academic journals and venues like *Stanford Social Innovation Review* and *Nonprofit Quarterly.*

The Networks for Social Impact in Education Series

How do organizations across sectors work together to improve educational outcomes? During this three-year research project, the Network for Nonprofit and Social Impact at Northwestern University investigated how groups of organizations worked together to improve student achievement. Reporting the results of this mixed-method study, the Networks for Social Impact in Education Series reveals previously undiscovered insights into the secret sauce for network assembly, management, and evolution.

THE REPORTS IN THIS SERIES INCLUDE:

Report 1: Networks that create a social impact

Report 2: Equity and empowerment in education networks

Report 3: Effective data practices support learning and systems alignment

Report 4: Navigating network change

Research Funding

RESEARCH TEAM

Michelle Shumate, *Northwestern University, Principal Investigator*

Rong Wang, *University of Kentucky*

Katherine R. Cooper, *DePaul University*

Jack L. Harris, *SUNY at New Paltz*

Shaun Doughtery, *Vanderbilt University*

Joshua Miles, *Northwestern University*

Anne-Marie Boyer, *Northwestern University*

Zachary Gibson, *Northwestern University*

Miranda Richardson, *University of Connecticut*

Hannah Kistler, *Vanderbilt University*

NORTHWESTERN UNIVERSITY UNDERGRADUATE RESEARCH ASSISTANTS:

Will Deschler, Lola Knight, Cara Savin, Hannah Song, Grace Koplin, Sherry Xue, Tess Hamermesh, Fallon Parfaite, Ali Wilt, Alexander Furuya, Jessica Suratkal, Lindsey Pape, Emily Comstock, Michelle Lee, Hansuh Rehee, Avery Kessee, Tiara Swartz, Andrew Wayne, Alexa Bagamian, Yuling Ding, Victoria Hahm, Yerim Kim, Ren MacLean, Gloria Mao, Esther Park, Anna Petraskova, Kevin Qiu, Fathom Rahman, Sumin Woo, Hui Ling Chen, Jaliene Ochoa, Harriet Zhao, Camille Garcia-Mendoza, Caleb Young, Jessica Serody

HIGH SCHOOL INTERN

Danielle Reiser

INTRODUCTION

Consultants and foundations often tout collective impact as the best approach for organizations responding to social problems in their community. Organizations that function under the collective impact tenets, such as having shared metrics and goals, are said to have more significant community outcomes. This study investigates whether the collective impact tenets represent the best way for all communities to make a social impact and which of those tenets is associated with student achievement.

Although collective impact has not gone entirely uncriticized, previous studies have failed to consider the potential influence of community context on social impact or have relied on perceptions of success as metrics for network effectiveness. This study measures networks' impact at the school district level (i.e., fourth and eighth-grade reading, high school graduation). It ensures that the measured impact is attributable to the network's initiatives and not external factors (e.g., changes impacting other communities within the state, changes in student achievement measures). We designed this study to answer the question: **Under what conditions does collective impact result in more significant social impact than other approaches?** This question is novel in and of itself, as it takes a step back from the collective impact case studies to examine alternative approaches.

This study examines and accounts for several alternative explanations. These include:

- Can the changes be attributed to the network, or other similar communities in the state experience the same types of changes?

- Would any joint activity across organizations produce similar outcomes, or is there something advantageous about working together in a collective impact framework?

This research examined 26 networks across the United States, half of which adhered closely to the collective impact model, and the other half of which did not. We matched a network from both groups based upon community similarity and analyzed differences in community-level outcomes.

NETWORKS IN THIS STUDY

This research examined 26 networks in diverse communities in the United States (see Appendix for a complete network list). All of the networks focused, at least in part, on education reform in their communities. We used a matched sample technique to select the networks. Half of the networks in the sample adhered closely to the collective impact model. The other half were matched to these networks, based upon community similarity, and did not firmly adhere to collective impact tenets (see box).

COLLECTIVE IMPACT NETWORKS:

Thirteen networks adhered to the tenets of collective impact. They met the initial criteria[1] established for collective impact. They had:
1. completed at least a baseline data report (demonstrating data sharing).
2. a central organization performing backbone functions
3. established a common agenda.
4. a systems-alignment framework of action, typically cradle to career, and
5. frequent meetings of high-level leaders.

In short, they resembled the initial collective impact model.

MATCHED SAMPLE:

Thirteen networks were in similar communities as collective impact networks. Each matched pair was from the same state, a similar-sized community, and had similar city demographics to ensure comparability. The matching process included geographic (e.g., population density, coverage area), demographic (e.g., race and poverty rate), and labor market factors (e.g., unemployment rate and median income). Matched sample networks were sometimes early collective impact networks or aspired to the collective impact model. However, they were missing elements of the model in comparison to their collective impact counterparts. Most commonly, these networks were missing a baseline data report and system-alignment framework of action. In one case (e.g., Ohio pair), both networks were advanced stage collective impact initiatives.

---

[1] *The collective impact framework continues to evolve. Notably, the Collective Impact Principles of Practice extend beyond these five criteria to embrace greater priorities on equity, community involvement, data use, coalition culture, and customizing to the local context (https://www.collectiveimpactforum.org/resources/collective-impact-principles-practice)*

The twenty-six networks are in 11 states. We chose networks that differed in various ways. They varied in size, *ranging from 8 to 102 organizations*, with the average network having 35 organizations participate. They serve *rural, suburban, and urban communities*; some networks spanned multiple types of areas. *The average founding date is 2012* — all but four networks are at least three years old. In 20 of the networks, the founder went on to manage the network. Networks had *different lead agency or "backbone" types:* 12 have a philanthropic or federated organization, 6 have a government agency, 6 have a community-based nonprofit, and 2 have a post-secondary institution. The research reports data collected from 2017-2020.
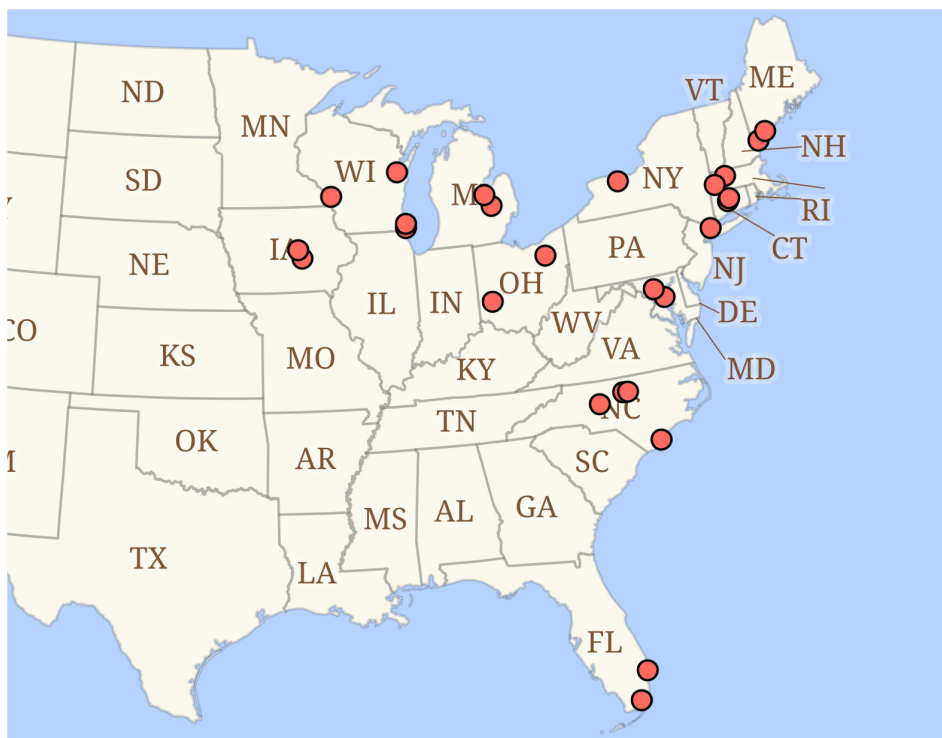
Data Collection Measures and Analysis

We used a mixed-method design, incorporating qualitative interviews, archival data, organizational surveys, and community-level education outcomes. Networks received $1500 as compensation for their participation over three years.

We conducted two interviews with the network leads of all 26 communities, two years apart. Each interview lasted about an hour. Researchers asked about the history and champions of the network, mission statement, funding sources, strategies used for partner alignment, data use, community engagement activities, and equity practices. With their permission, these interviews were recorded and transcribed for accuracy.

We also conducted surveys with the leader of each organization in each network via phone. We asked about the organization's involvement in activities to improve educational outcomes, interorganizational relationships, perceptions about network management quality, and their programs to address educational outcomes within particular policy domains.

We collected archival data from the networks, including press releases, meeting notes, annual reports, partner rosters, and founding documents, such as Memorandum of Understanding (MOU). We collected education outcome data from the National Center for Education Statistics (NCES) and other appropriate state-level agencies. This data specifically included measures of 4th- and 8th-grade reading proficiency and high school graduation rates.

We used an inherently mixed-methods design that combines both quantitative evaluations with qualitative interpretation and context. We compared the analysis results to explore any differences between matched communities.

Reflections on the Design: Strengths and Limitations

As a result of the many necessary considerations in the design process, we prioritized some research elements over others. **As such, this study has the following strengths:**

- **Multi-factor consideration:** Not only did this study evaluate 26 diverse communities, but it also considered many factors within each community, including the perspective of organizational and network leaders, many measures of educational-level data, and founding information of networks. We monitored these factors over three years.

- **Multilevel analysis and several rounds of coding:** This study employed a mix of methodological analyses to account for biases in any data type. Additionally, the research team conducted several rounds of coding with independent coders to ensure accurate results.

- **Broad community focus, with a narrow education scope:** This research focuses on three student achievement measures. Its robust design allows for an objective analysis of how network design influences these student achievement metrics. In this analysis, we measure improvements at the school district level[2] since the founding of the network. Because we focused on relatively few networks, we could compare these networks' outcomes to other school districts in their state.

---

[2] *Eight of the networks in our sample focused on a sub-set of schools within a school district. Unfortunately, state data does not consistently report data at the school level. Analysis examines the whole school district if the network reported that it had schools within the district participate in the network. Every network we studied worked with public schools in their community.*

We acknowledge the following limitations:

● **Social Impact evaluated based on educational outcomes:** This study analyzed aggregated educational outcome data. Student achievement isn't the only important community outcome for many of the networks we studied, however. We chose consistent metrics for robust comparison, but many networks likely positively affect socio-emotional well-being, reduce violence in their community, and reduce risky adolescent behaviors.

● **Only three educational outcomes indicators:** Other academic achievement indicators considered but not included in this study include kindergarten readiness, ACT scores, post-secondary enrollment, retention, and completion. The final analysis compared 4th- and 8th-grade reading proficiency and high school graduation rates because these were the most consistently available across states.

● **Networks are in the East Coast and Midwest of the United States.** The networks cover eleven states.[3] These networks are concentrated primarily in the East Coast and Midwest, and none are on the West Coast.[4] Exploring initiatives in some regions of the U.S. is not necessarily generalizable to networks in non-studied locations. However, the many other characteristics and attributes of each network still allow for comparison.

● **Some networks focused on state-level policy.** A few of the networks that we studied were actively involved in state-wide education advocacy. Our model does not capture if education outcomes improved across the state as a result of their efforts.

---

[3] *Connecticut, Florida, Iowa, Maryland, Massachusetts, Michigan, Maine, New York, North Carolina, New York, Ohio, Wisconsin.*
[4] *We tried for several months to identify a matched pair on the West Coast. However, collective impact was so prevalent in West Coast communities, California especially, that we could not identify a matched community that was not using the collective impact model.*

SOCIAL IMPACT

One of the most important goals of this study was to determine whether collective impact resulted in more significant social impact than other approaches. The critical challenge to studying social impact in networks is deciding whether the student achievement gains can be attributed to the network's activities or would have occurred anyway. In addition, comparing network outcomes across networks is challenging because (a) networks serve different student populations and (b) education metrics differ across state boundaries.

To address these concerns, we used a novel approach. We conducted a comparative interrupted time series per state and metric for each of the networks we studied. In this analysis, the school district was the unit of analysis. **We concentrated on three key metrics because the data was available across the 11 U.S. states:[5] 4th-grade (Year 5) literacy scores, 8th-grade literacy scores (Year 9), and high school (secondary school) completion rate.** The analysis accounted for three factors: (1) when the network was founded (i.e., the interruption), (2) the percentage of free and reduced lunch students in the district (i.e., a measure of student poverty) and (3) the percentage of Black and Hispanic students, because ethnicity is associated with academic performance due to historical disparities in the United States.

From this analysis, we created an effectiveness score for each school district that the network served. That effectiveness score indicates how different the post-founding metrics were from what was happening in the same period in other school districts around the state. Moreover, the score shows how much the network's founding changed the metrics relative to itself in the prior period. The scores give us a sense of the relative magnitude of any change (i.e., the residual score[6]). These scores also took into account the demographics of the district. If the effectiveness score was positive, the outcomes are better than we would expect in the state, given the district's demographics. If it was negative, the results are worse than expected in the state, accounting for the same demographics. A score of zero indicates no difference. In cases where a network served more than one school district, we created a weighted average based on student enrollment.

---

[5] *U.S. states differ in the types of public education data measured and publicly available at the district level. High School graduation data was not available for two Wisconsin and one North Carolina network. Fourth grade reading was not available in Massachusetts. Data was not available in periods that predated the founding of networks in Ohio and Connecticut. As such, we conducted a cross-sectional analysis rather than an interrupted time series for networks in these states.*

BASED ON THIS ANALYSIS, WE CONCLUDE:

01

Social impact is rare. Eight of 26 networks had any evidence of positive social impact (i.e., positive residual scores for the three student achievement metrics examined). Only three of those networks had two positive metrics of social impact. In short, it's rare for networks to improve student achievement metrics in a way that is attributable to the actions of the network.

02

Greater adherence to the initial collective impact tenets does not necessarily lead to a more significant social impact. Only one of the eight networks with evidence of social impact, as measured in this research, adhered to the collective impact model. Instead, networks adopted different models, including community-based schools, community empowerment models, Campaign for Grade-Level Reading Practices programs, and My Brother's Keeper initiatives. In short, our research suggests that there is more than one way to achieve social impact, as indicated by student achievement at the school district level.

Our results differ from those of the ORS Impact and the Spark Policy Institute, which only compared collective impact networks. Moreover, our research differs from many case studies that used perceptions of success or raw percentage gain in metrics as evidence of social impact. These methods fail to account for changes that were happening state-wide or the changing demographics of districts.

Our analysis uses more rigorous tests, accounting for the districts' metrics before introducing collective impact, the state trends, and controlling for district-level demographics. An investigation that fails to account for these confounding factors does not establish that changes in metrics associated with collective impact are caused by the collective impact initiative or other factors.

03

Social impact takes time. All of the networks where we find social impact have been in existence for at least three years. This finding is consistent with prior research that finds that networks take three to five years before they have the potential to achieve social impact. Although age does not guarantee social impact, networks in the first or second year of operation do not achieve ecosystem-level social impact.

---

[6] *In regression-based analysis, residuals are the distance that an observed score is from the predicted score. All regression-based analysis can be visualized as a graph where the Y-axis is the outcome value (i.e., 4th grade reading, 8th grade reading, high school graduation rate), the X-axis is the independent variables (i.e., community poverty rate, percentage students Black and Hispanic). The line represents the predicted value of the outcome variable given the values for the independent variables. Residual values are the distance an individual observation (e.g., District 106's scores) is from that line on the graph. If the observation is above the predictor line, we say that the residual is positive. If the observation is below the predictor line, we say the residual is negative. If the value is on the regression line, we say the model explains the individual observation. In our model, we said that the network was successful if the residual was positive and at least .3 in magnitude. This is a small difference, but large enough to be meaningful in this context.*

[7] *Cristofoli, Daniela, and Laura Macciò. "To Wind a Skein into a Ball: Exploring the Concept and Measures of Public Network Performance." Public Management Review 20, no. 6 (June 2018): 896–922. https://doi.org/10.1080/14719037.2017.1363904; Raab, Jörg, Remco S. Mannak, and Bart Cambré. "Combining Structure, Governance, and Context: A Configurational Approach to Network Effectiveness." Journal of Public Administration Research and Theory 25, no. 2 (April 1, 2015): 479–511. https://doi.org/10.1093/jopart/mut039.*

What works?

So, what leads to greater social impact? We conducted a qualitative analysis to develop a picture of the network designs associated with more significant social impact.[8] We accounted for the degree of success (i.e., how many metrics were positive).

We considered the following factors in creating our model:

COMMUNITY POVERTY

One of the most consistent findings in network research is that resources in a community determine whether networks can achieve social impact. We focused on the percentage of residents in a community that was below the poverty line. If that number was higher than the national average of 12.7%,[9] we classified a network as being in a community with high poverty.

NETWORK GOVERNANCE

Network governance describes the ways that decisions get made in the network. Our model ranges from full decentralized governance, where decisions are made primarily by a committee through voting or consensus, to centralized governance, where one organization (either an agency in the network or an intermediary organization set up for governance purposes) sets the network's agenda.

THEORY OF CHANGE

We focused on the network's theory of change. A theory of change is how networks make a social impact above and beyond the organizations' efforts in the networks. Some networks focused on creating programs. Others focused more significantly on advocacy and creating policy change. Still, others focused on improving the quality of programs and services organizations already had. And others focused on systems alignment, where programs were coordinated to achieve more remarkable results than they could independently. These activities are the most immediate attributable cause for social impact.

NETWORK SIZE

The number of organizations in the networks we studied varied considerably. Networks ranged in size from 8 to 102 organizations. The average network has 35 organizations participating. Of course, these organizations' levels of participation in the network varied.

[8] In particular, our research uses a method called Qualitative Comparative Analysis. This method, associated with set theory, has some advantages over traditional qualitative analysis for our purposes. First, the method uses Boolean logic (i.e., the combination of factors with AND, NOT) to create a result. This allowed us to examine if some network designs were better suited to particular circumstances. Second, the method allows for equifinality (i.e., more than one solution). This allowed us to examine the multiple network designs that were associated with outcomes, rather than focusing on a single model. Finally, the method requires examining both the positive cases (i.e., when social impact occurred) and negative cases (i.e. when social impact did not occur). In order to appear in the solutions we describe below, the combination had to explain positive cases and not be associated with any of the negative cases.

[9] Data were drawn from the American Community Survey (U.S. Census Bureau, 2016).

THEORY OF CHANGE

PROJECT-BASED
- Focus on developing new programs and services
- Organizations combine resources to create the program and they jointly own the outcome of that program/service

LEARNING-BASED
- Focus on improving the existing programs and services of individual organizations in the network
- Often use rigorous evaluation systems to identify best practices and areas for improvement

POLICY-BASED
- Focus on advocating for municipal, state, or national regulations, funding, or government-led change efforts
- Network's power comes form the joint voice of the many organizations in the network
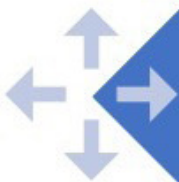
CATALYST
- Focus is to further the scale of social impact
- Have proven solution that they hope to diffuse across a broader set of organizations or a wider geographic area

SYSTEM ALIGNMENT
- Focus on coordinating existing programs and services so that the whole is more than the sum of the parts
- Identify gaps in service, realign existing organization efforts, and capitalize on synergies across programs

Network Designs for Social Impact

The analysis method (see footnote 6) that we used fits with a core assumption of this research - there is more than one way for networks to achieve a social impact. Our analysis allowed us to find the combination of factors associated with social impact for all 8 we identified as producing successful outcomes. Two combinations of elements explained 7 of those networks.[10] No network design suggests that centralized governance is essential for achieving social impact and two designs suggest that decentralized governance is associated with more significant social impact. We report these combinations as successful designs for social impact.

01 **In the first social impact design, networks combined systems-alignment and learning theories of change.** In our research, networks embrace four different theories of change - sometimes only enacting one logic of change (e.g., project, advocacy) and sometimes enacting them in combination. Networks that embraced both systems alignment and learning models of change were more likely to impact student achievement positively.

The Hartford Partnership for Student Success (HPSS) is a prime example of this design. HPSS's 4th-grade reading and 8th-grade reading scores are both above expected values. HPSS uses a community schools' approach, providing wrap-around support to help drive student achievement. Through this approach, they align services. The services range from one-on-one volunteer reading support and after-school STEM programming to dental, health, and mental health services. Over time, the network has embraced providing wrap-around supports to families, not just students.

HPSS combines this systems alignment theory of change with learning. The Children's Aids Society, experts in community schools, attend monthly meetings, do site visits, and provide regular feedback. Additionally, HPSS utilizes an external evaluator, working with them closely for several years. They have amended their model based on what they've learned - improving their logic of change over time.

Combining learning and systems alignment is a powerful catalyst for social impact. Learning can occur through external evaluators, like HPSS, or through data-driven continuous quality improvement.

Learn to Earn Dayton, another successful network using this design uses continuous quality improvement to drive social impact. They have a robust data model to identify and improve systems-level outcomes (see Report 3 in this series for more on data systems that support social impact). They convene providers

---

[10] *One network, Pittsfield Promise, had a unique design for success. However, with only one network successfully using the design, we do not feel we have enough data to recommend the design. configuration. Future research may find more networks utilize this unique combination.*

focused on the same cradle-to-career outcomes (e.g., kindergarten readiness, high school graduation). These learning communities identify best practices among providers. In cases where no best practices exist, organizations learn together by developing pilot projects and emulating successful ones. They also encourage learning through professional development programs (for more on professional development, see Report 3).

Collective impact networks that adopt both systems alignment and learning models of change can improve student achievement outcomes. Learn to Earn Dayton is a collective impact network with a strong learning culture. We highlight this network as a best practice model that deserves further attention.

02 The second design for social impact only worked in communities that were above the national poverty line. In these communities, **networks used a distributed governance model and a project-based theory of change to achieve social impact.**

Grinnell, Iowa's Campaign for Grade-Level Reading is an example. Their High School Graduation, 8th-grade reading, and 4th-grade reading metrics were above the expected values. The network is relatively small, and they make decisions through discussion. As Nicole Behrens explains, "when there's a new direction, we talk about it and try to plan for it. And then, we implement it in a task force or some other capacity within the program." Through their scan of Iowa's education landscape, they developed a set of programs, including after-school enrichment, professional development workshops for educational professionals to learn about career pathways, summer learning programs, and a suite of activities designed to address chronic absenteeism.

Networks using the second design were small, with fewer than 14 organizations participating. In small networks, network leaders often play a facilitation role rather than a directive one. These networks benefit from the joint efforts of organizations to produce a set of new programs. In project-based theories of change, the quality of the suite of programs determines the social impact (see Report 3 for more on the ways that networks successfully incorporated evidence-based practice into program design).

In sum, two designs are associated with social impact in our research - (1) combining systems alignment with a learning theory of change and (2) a decentralized group of organizations working together to create new programs. Both designs propelled these networks to achieve rare gains in student achievement. The model elements (i.e., only systems alignment theory of change, only decentralized governance) did not produce social impact independently. It was only their combination that led to more significant student achievement.

IMPLICATIONS

NETWORK LEADERS

- Choose the design for social impact that works best for your context.

  - If your community does not have a high poverty rate and is relatively small, a group of stakeholders can jointly enact new programs that make a difference. This network design is less expensive and time-intensive than learning and systems-alignment theories of change.

  - However, for communities with many stakeholders or with high community poverty, networks can embrace both learning and systems-alignment theories of change to move student outcomes at the district level.

FUNDERS

- Assess impact potential. Recognize that social impact can occur through different network designs. Ask questions regarding the network's structure, and specifically inquire about the inclusion of local circumstances within the design and implementation of their programs.

- Know that social impact takes time. Ask networks about their long-term plan and the steps they plan to take to achieve outcomes.