What Does the Literature Say About the Effectiveness of Interorganizational Collaboration?

The U.S. Department of Education Office of Special Education Program's (OSEP) vision for its Technical Assistance and Dissemination (TA&D) centers is that they will, when appropriate, work together and provide collaborative, effective, and efficient targeted and intensive technical assistance (TA), especially when working to provide TA within the same state.[1] In fact, collaboration is a key component of OSEP's conceptual framework, and OSEP expects TA&D centers to collaborate to leverage and maximize resources and increase the likelihood of systemic improvements by helping states prioritize their needs. This review was developed to inform OSEP's ongoing efforts to deliver the highest quality TA&D projects and to determine whether and how interorganizational collaboration between TA centers might lead to improved outcomes. The literature is broad, so the focus here is limited to whether and how interorganizational collaboration might lead to improved outcomes, with particular attention paid to sources that focused on collaboration between organizations that were comparable to the TA&D centers (see the Appendix for key points from relevant sources).

Defining Collaboration. Collaboration can occur within organizations, referred to as intraorganizational collaboration, or between organizations, known as interorganizational collaboration. There is currently no singular, standard definition of interorganizational collaboration;[2] in fact, a literature review on interorganizational collaboration identified 15 different definitions.[3] This is a critical point to consider when organizations think about collaborating because it cannot be assumed that participating organizations will begin the work with a common definition. For the purposes of this brief, the definition of collaboration from OSEP's Vision for Targeted and Intensive TA will be used.[4]

> **Collaboration:** *Entities, projects, or stakeholders working together to achieve a common goal through shared resources and responsibilities.*

How and in What Contexts Might Organizations Collaborate?

The literature cites many reasons that organizations may want to collaborate. For example, collaboration can connect fragmented systems in an attempt to more effectively address wide-ranging and complex issues.[5,6] When organizations are able to combine resources or share costs through complementary budgets, they can serve larger populations, for instance through reaching new geographical regions or additional populations. Moreover, when organizations work together towards a common goal, there is an opportunity to add expertise and learn from different groups with the goal of improving the quality of goals and decisions.[7]

In its vision for the TA&D Network, OSEP specifies that "collaboration occurs as appropriate, when appropriate, and to the extent appropriate."[8] As such, organizations considering collaboration must carefully consider the

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[1] U.S. Department of Education. (2015). Vision for Targeted and Intensive Technical Assistance. Washington, DC: U.S. Department of Education, Office of Special Education Programs.
[2] Thompson et al., 2009.
[3] Longoria, 2005.
[4] U.S. Department of Education, 2015.
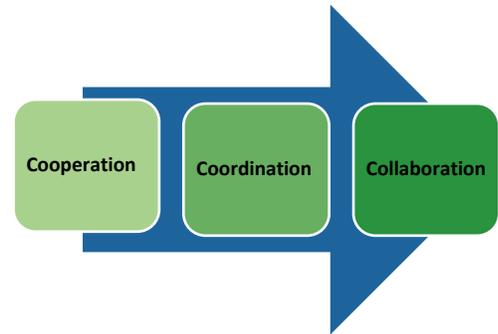[5] Gajda, R., 2004.
[6] Stuart et al., 2011.
[7] Entwistle, 2014.
[8] U.S. Department of Education, 2015, p.3.

context and the goals of the proposed collaboration, and the actual level of integration that can be expected among the organizations, to determine when collaboration might be "appropriate."

Figure 1. Levels of Working Together

Levels of Working Together. Organizations can work together in any number of ways. Researchers have developed a continuum that describes the different levels of intensity with which organizations can work together (Figure 1).[9,10] In this model, cooperation, at the lowest end of the continuum, is characterized by formal processes for sharing information. Next, coordination involves common tasks, compatible goals, and some shared decision making. Collaboration is at the highest level and is a more intensive way of working together in which organizations work on common tasks using jointly defined strategies implemented with comprehensive planning, communication, and a collective purpose.[11]

It is important to keep in mind that the intensity with which organizations work together should correspond to the purpose and goals of the proposed project.[12,13] Organizations can use the questions provided in Table 1 to stimulate thinking and ultimately choose an appropriate approach to working together, given the specific context and the goals of a particular project.

Table 1. Questions to Consider When Choosing an Approach to Working Together

	Question	Answer		Action Steps
(1)	Do all organizations have a clear mission?	Yes - continue to question 2	No or unclear	Develop a vision, mission statement, logic model, or theory of action, as needed, for all organizations under consideration for collaboration. Then, move to question 2.
(2)	Do all organizations have a clear, shared objective they want to work toward?	Yes - continue to question 3	No or unclear	Ensure that all organizations have a clear, shared understanding of the purpose of collaboration and a common objective. Then, move to question 3. OR, IF THIS IS NOT POSSIBLE Consider cooperation rather than collaboration.
(3)	Is there a clear way for organizations to avoid duplication and leverage each other's resources?	Yes - continue to question 4	No or unclear	Establish mechanisms to limit overlap of work and resource. Then, move to question 4. OR, IF THIS IS NOT POSSIBLE Consider cooperation rather than collaboration.
(4)	Is the proposed collaboration able to introduce efficiencies in the delivery of services, products, etc.?	Yes - continue to question 5	No or unclear	Work together to identify efficiencies. Then, move to question 5. OR, IF THIS IS NOT POSSIBLE Consider coordination rather than collaboration.
(5)	Can this work be done more effectively if these organizations collaborate?	Yes - continue to question 6	No or unclear	Work together to identify areas of increased effectiveness that will be possible through collaboration.. Then, move to question 6. OR, IF THIS IS NOT POSSIBLE Consider coordination rather than collaboration.
(6)	Will common tasks be implemented with integrated strategies including comprehensive planning, communication, and collective purpose?	Yes - **pursue collaboration**	No or unclear	Work together to establish integrated strategies for common tasks. Then, consider collaboration. OR, IF THIS IS NOT POSSIBLE Consider coordination rather than collaboration.

Adapted from: Association of State and Territorial Dental Directors, 2012.

[9] Entwistle, 2014.

[10] Woodland & Hutton, 2012.

[11] Association of State and Territorial Dental Directors, 2012; Frey et al., 2006. Other versions of the continuum also includes "communication" at the lowest end of the spectrum and "coadunation" at the highest end of the spectrum. Coadundation is defined as organizations working with a unified structure and combined culture.

[12] Stuart et al., 2011.

[13] Woodland & Hutton, 2012.

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When the answer to all questions in Table 1 is "yes," the work may benefit from collaboration (as defined by the framework above). However, if the answer to one or more questions is "no or unclear," the project may benefit from increased planning or from another method of working together, such as cooperation or coordination.

How Can Collaboration be Supported?

There is consensus in the literature that once organizations have decided to pursue collaboration, the work will require careful planning, ongoing support, and evaluation. While the literature base is largely qualitative, descriptive, and theoretical, a central theme that surfaced across the documents reviewed is that collaboration is difficult work that takes time, energy, and infrastructure.[14] Collaboration can involve complex interpersonal interactions, requires trust, and can place demands on organizations to work in ways that they otherwise would not. [15, 16,17] Moreover, collaboration can be especially difficult for organizations that might be competing for the same resources.[18,19]

While the difficulties associated with collaboration have been well-documented, the exact components of an effective collaboration have not yet been determined through rigorous research or evaluation. Still, when looking across the available literature, several elements repeatedly emerge as those which may increase the chances that a collaboration will succeed.[20] In particular, the literature suggests that establishing clear and formalized infrastructure and processes may increase the likelihood that collaborations will succeed, including: [21, 22, 23, 24, 25, 26, 27]

- Clear lines of communication
- Specific guidelines for the division of tasks (taking care not to have overlapping activities/functions across organizations)
- Clear guidelines for authentic decision-making processes in which all parties have a voice
- Dedicated time and personnel
- Infrastructure (such as technology) to support shared work
- External support for the collaboration (when possible, provided centrally)
- Data collection processes
- Data sharing processes to track learning and implementation decisions

Researchers also suggest that organizations that have assessed their readiness to engage in a collaboration are more likely to be successful.[28] Table 2 outlines some questions organizations that are planning to collaborate might want to consider in advance. It also includes action steps and expected results associated with each question. As you think through the questions, document each action step, as having this information in writing will be invaluable as the collaboration proceeds.

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[14] Longoria, 2005.
[15] Thompson et al., 2009.
[16] Proulx et al., 2014.
[17] Woodland & Hutton, 2012.
[18] Proulx et al., 2014.
[19] Hughes & Weiss, 2007.
[20] Entwistle, 2014.
[21] Kania & Kramer, 2011.
[22] Woodland & Hutton, 2012.
[23] Proulx et al., 2014.
[24] Cheng et al., 2015.
[25] Entwistle, 2014.
[26] Provan & Milward, 1995.
[27] Hicks et al., 2008.
[28] Stuart et al., 2011.

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Table 2. Questions to Consider When Planning a Collaboration

Key Question	Action Steps	Result
(1) **What are we planning to do?**	☐ Discuss meanings and assumptions of collaboration ☐ Work together to define collaboration using concrete terms and measureable criteria.	Shared definition of collaboration in this context.
(2) **Why do we want to collaborate?**	☐ Determine a shared purpose ☐ Document specific outcomes that can only be accomplished (or can be accomplished better) as a result of the collaboration	Clear understanding of the benefit of collaboration.
(3) **How will we collaborate?**	☐ Establish clear objectives ☐ Jointly develop and document the decision-making processes that will be used to make decisions about the collaboration. ☐ Jointly develop and document roles and responsibilities (who is working for whom and for what purpose) ☐ Establish a communication system, schedule, and formal information channels	Clear, jointly-defined, documented, and credible process and method for collaborating.
(4) **How will we support the collaboration?**	☐ Allocate resources ☐ Dedicate time/personnel and administrative structures ☐ Employ shared technology/database ☐ Develop a process for managing the collaboration	Supporting structures in place.
(5) **How will we know if we are effective?**	☐ Develop leading indicators that can be collected across all organizations ☐ Develop indicators for short- and long-term outcomes ☐ Determine who will collect, analyze, and report data ☐ Develop a process for data-based decision making about the work.	Leading and outcome indicators selected. Process for collecting, analyzing, reporting, and using data established. Data used to make decisions.
Organizations should complete all of the action steps and any others that might be necessary given the specific situation until the expected results are realized.		

Note: The information in this worksheet is derived from various sources including: Association of State and Territorial Dental Directors, 2012; Entwistle, 2014; Frey et al., 2006; Hicks et al., 2008; Longoria, 2005; Thompson & Perry, 2006; Thompson et al., 2009; & Woodland & Hutton, 2012.

How Have Outcomes of Collaboration Been Researched and Evaluated?

In the literature on interorganizational collaboration, research and evaluation are often quite distinct. The evaluation literature is nearly exclusively focused on process, with the evaluator often involved from the very beginning, for example, working with organizations to define the collaboration. In turn, there is a limited body of research that seeks to understand how and to what extent interorganizational collaboration might lead to improved outcomes, although "outcomes" and even "collaboration" are defined differently across studies, making comparisons difficult.[29]

Evaluation of collaboration. The complexity of interorganizational collaboration and the unique nature of each instance of collaboration (and the associated outcomes) pose ongoing challenges to evaluative efforts. The literature on evaluating interorganizational collaboration is heavily focused on process and lacks a consistent mechanism for assessing long-term client-level outcomes. For example, in one accepted model of evaluating collaboration, client-level outcomes are not examined at all. In this model, the phases of the evaluation include: operationalizing collaboration, identifying and mapping communities of practice, monitoring stages of development, assessing levels of integration, and assessing cycles of inquiry.[30]

Research on collaboration. There is not much empirical research that evaluates outcomes for the clients that the collaborating organizations serve (i.e., client-level outcomes).[31] Specifically, much of the literature is theoretical and, of the literature that includes empirical studies, most are qualitative case studies.[32, 33] When outcomes are examined, internal outcomes are often the focus, meaning that the effectiveness of a collaboration is measured by changes

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[29] Thompson et al., 2009.
[30] Woodland & Hutton, 2012.
[31] Andrews & Entwistle, 2010.
[32] Longoria, 2005.
[33] Stuart et al., 2011.

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within the collaborating organizations themselves.[34] Of the few studies that attempt to quantify client-level outcomes of collaboration, most are correlational and lack a mechanism for understanding differences in outcomes for clients of organizations that participated in the collaboration and those that did not.[35] Moreover, researchers have not used a consistent methodology to define or measure collaboration or outcomes. Further, the results of these research studies that do exist have been mixed, with some studies showing positive outcomes, some studies showing negative outcomes, and others showing both positive and negative outcomes.[36, 37, 38, 39, 40] More studies using rigorous research methodology are clearly needed.[41] For now, an important takeaway from the limited evaluation and research base is that organizations considering whether to collaborate should not automatically assume that the collaboration will lead to improved client outcomes.

One Potential Direction

Recently, some organizations have embraced collective impact initiatives, which are typically focused on broad and complex issues in a variety of fields, including education, human services, and international development. Collective impact initiatives have five elements: common agenda, shared measurement system, mutually reinforcing activities, constant communication, and dedicated backbone support (detailed in Table 3).[42, 43, 44] In this model, dedicated backbone support refers to a separate, independently funded staff who have specific skills in facilitation, technology, communications, data collection and reporting, and administrative tasks and provide the support required for collective impact initiatives to be successful.

Table 3. Five Elements of Collective Impact

Element	Description
1. Common Agenda	Shared vision for change and joint vision for solution
2. Shared measurement system	Short list of indicators across all participants. Ensures efforts are aligned, partners are accountable, and adjustments can be made.
3. Mutually reinforcing activities	Participant activities should be differentiated such that each organization is working in their area of strength.
4. Constant communication	Frequent and structured communication to build trust, coordinate mutual objectives, and create motivation.
5. Dedicated backbone support	A separate, independently funded, and dedicated staff with specific skills to coordinate participating organizations and agencies.

Adapted from: Kania & Kramer, 2011; Kramer & Pfitzer, 2016; Preskill et al., 2014b.

Collective impact initiatives are structured specifically to avoid many of the pitfalls that collaborative efforts can encounter, and case studies have documented success with the collective impact approach.[45,46] However, the implementation of a collective impact initiative is not a quick or easy process. Indeed, collective impact initiatives involve three stages. Initiatives pass through the early years (which can encompass one to three years), and the middle years (two to ten years), before reaching the later years, when measureable changes in outcomes can be

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[34] *Ibid.*

[35] *Ibid.*

[36] Andrews & Entwistle, 2010.

[37] Glisson& Hemmelgarn, 1998.

[38] Provan & Milward, 1995.

[39] Selden et al., 2006.

[40] Hicks et al., 2008.

[41] Stuart et al., 2011.

[42] Kania & Kramer, 2011.

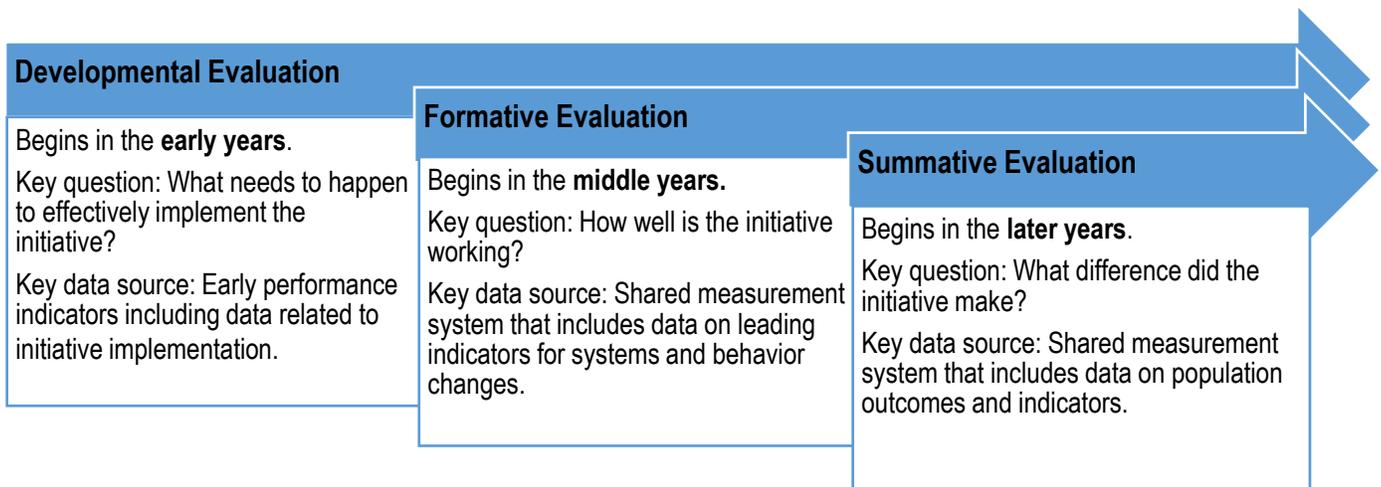[43] Kramer& Pfitzer, 2016.

[44] Preskill et al., 2014b.

[45] Kania & Kramer, 2011. Examples include a collective impact initiative focused on educational reform in Cincinnati that led to improved academic outcomes as well as a collective impact effort in Massachusetts city led to decreased rates of childhood obesity.

[46] Kramer & Pfitzer, 2016. Examples include a fertilizer company that worked with others to develop an agricultural corridor in Africa, which led to increased sales for the company and increased incomes for hundreds of thousands of farmers.

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expected. During the early years of a collective impact initiative, partners are focused on designing the initiative and the beginning stages of implementation, including establishing the five elements of collective impact (described in Table 3). In the middle years, implementation should be moving forward while partners use data from their shared measurement system to determine where, and for whom, the initiative is making the most progress. During the middle years, partners can expect to see internal outcomes including changes to professional practice and the way that systems are operating. In the later years, the initiative's activities should be well established and partners can begin to assess how well it is meeting its ultimate goals.[47]

Evaluation of Collective Impact Initiatives. The model for evaluation in collective impact initiatives is especially promising, possibly even for evaluating collaborations. This model of evaluation provides a clear framework for responsive and flexible, yet intentional, evaluation activities that provide data to support processes and assess outcomes.[48] While acknowledging the invaluable role that evaluation plays throughout a collective impact initiative, this evaluation model also provides data on the outcomes for clients served by the participating organizations. The framework in Figure 2 shows how evaluation activities are expected to change over the course of an initiative. In the early years, evaluation activities should be developmental in nature and provide early performance indicators to assess implementation. In the middle years of the initiative, evaluators should take a formative approach, supplying leading-indicator data on systems and behavior change. Finally, in the later years, the initiative will be ready for a summative evaluation during which the evaluators can begin to assess the population-level effect of the initiative.[49] Of course, developmental and formative evaluation activities will continue throughout the duration of the initiative, as processes are continuously refined with feedback loops.

Figure 2. Evaluation in Collective Impact Initiatives

Developmental Evaluation

Begins in the **early years**.

Key question: What needs to happen to effectively implement the initiative?

Key data source: Early performance indicators including data related to initiative implementation.

Formative Evaluation

Begins in the **middle years.**

Key question: How well is the initiative working?

Key data source: Shared measurement system that includes data on leading indicators for systems and behavior changes.

Summative Evaluation

Begins in the **later years**.

Key question: What difference did the initiative make?

Key data source: Shared measurement system that includes data on population outcomes and indicators.

Adapted from: Preskill et al., 2014a.

Summary and Considerations for Moving Forward

The current research related to whether collaboration is effective at improving outcomes is inconclusive. Additional, more rigorous studies are needed. It is clear from the literature, though, that collaboration is difficult, time- and resource-intensive work that is not always successful. As such, it is important to recognize that not all work between organizations needs to be "collaboration"; there are situations in which activities more aligned with "cooperation" or "coordination" may be more appropriate. If true collaboration is appropriate, the literature suggests that it is more likely to succeed if organizations establish a shared definition of collaboration; a clear understanding of the benefit of collaboration; well-defined processes and methods for collaborating; and supporting structures and

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[47] Preskill et al., 2014a.
[48] *Ibid.*
[49] *Ibid.*

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metrics for success. To facilitate this work, organizations that plan to collaborate should think carefully through the questions outlined in Tables 1 and 2 to determine whether the structures and processes are in place to support collaboration. The idea of collective impact could be a promising future direction as it provides a framework for collaborative efforts that are more structured, substantial, and likely to persist due to the established support structures.

Evaluation is a key component of successful collaborative endeavors and should be built into collaboration from the very beginning. An important precursor to a strong evaluation of a collaborative effort is the establishment of a consistent and rigorous method for evaluating the outcomes of the work. The model for evaluation associated with collective impact shows particular promise for evaluating collaborations as well as collective impact initiatives, as it provides both process- and outcome-related data. Despite findings suggesting that collaboration is difficult, there remain many reasons that organizations might consider it. If organizations do decide that they have work that will be accomplished more efficiently and effectively through collaboration, participating organizations must invest time in developing the necessary processes, structures, and evaluation plans to increase the likelihood that the collaboration will be successful.

Suggested citation: Moore, H., & Lammert, J. (2017). *What does the literature say about the effectiveness of interorganizational collaboration?* Rockville, MD: Westat, Center to Improve Project Performance.

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Literature Search Methodology

This brief focuses specifically on the outcomes of interorganizational collaboration. Literature search terms included *evaluation of collaboration, outcomes of collaboration, outcomes of interorganizational collaboration, evaluation of interorganizational collaboration, outcomes of interorganizational partnerships,* and *evaluation of interorganizational partnerships.* Initially, sources in the fields of international development and agricultural extension were targeted, given the often collaborative nature of that work, to determine if work related to evaluating collaboration was occurring. In addition, as the search was refined the terms *evaluation of collective impact* and *outcomes of collective impact* were added. Bibliographies of key sources were mined to identify additional sources. In addition, an expert interview was used to ensure that key sources related to outcomes of interorganizational collaboration were included. Peer reviewed articles were prioritized but handbooks and guidelines were also included (those developed by authors who had published in the field were relied upon more heavily). Through this search, literature was identified that focused on collaborations or partnerships between individuals, and these sources were not included in the review—especially if the individuals were working at the same organization. In addition, the search resulted in many sources that focused on the process of collaboration, which was not a primary focus of this review.

The annotated bibliography presented below only includes the sources that were directly cited in the brief. In all, over 45 documents were reviewed and an annotated bibliography that includes descriptions of all of these sources is included in a separate document.

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Annotated Bibliography

Andrews, R., & Entwistle, T. (2010). Does cross-sectoral partnership deliver? An empirical exploration of public service effectiveness, efficiency, and equity. *Journal of Public Administration and Theory, 20*(3), 679-701.
- Exploratory quantitative analysis of the relationship between types of public service partnerships and outcomes.
- Only public-public partnership was positively associated with effectiveness, efficiency, and equity.
- Public-private partnership was negatively associated with effectiveness and equity and non-significant for efficiency.

Association of State and Territorial Dental Directors (2012). *Handbook on planning, evaluating, improving collaboration for oral health programs*. Retrieved from http://www.astdd.org/docs/collaboration-evaluation-handbook-final.pdf
- An overview of Woodland's seven-step Collaboration Evaluation and Improvement Framework: 1) determine a shared purpose, 2) raise collaboration literacy, 3) inventory and map communities of practice, 4) monitor stages of development, 5) assess levels of integration, 6) assess inter-professional collaboration, and 7) develop a communication plan.
- Within each step are several sub-steps and processes. This document contains several worksheets that can be used to facilitate the evaluation of each step.
- The author advised against collaborating unless the project will move forward more efficiently and effectively, there is a clear overlap in the missions of the organizations, and the collaboration will result in better work than either organization could produce alone.

Cheng, A.S., Gerlak, A.K., Dale, L., & Mattor, T. (2015). Examining the adaptability of collaborative governance associated with publicly managed ecosystems over time: Insights from the Front Range Roundtable, Colorado, USA. *Ecology and Society, 20*(1): 35.
- Ten-year qualitative case study on the adaptability of a collaborative governance regime in Colorado. Outcomes were not examined.
- The regime had difficulty adapting to external and internal issues. Researchers identified a lack of processes/infrastructures to track learning and implementation decisions.
- Recommendation for "boundary objects." Boundary objects are structures that span collaborating organizations (for example, joint databases) and they must be designed and managed so that they last when network membership changes.

Entwistle. (2014). *Collaboration and public services improvement: evidence review prepared for the Commission on Public Service Governance and Delivery*. Cardiff, Wales, U.K: Public Policy Institute for Wales.
- Review on the benefits of collaboration, which include to engaging with different organizations to improve knowledge flow, economies of scope; and, economies of scale. Collaboration is inevitable because there are not many alternatives.
- Networks require active management, including external support and clear methods for reporting and accountability.
- Evidence for collaboration is limited, and only few studies have evaluated outcomes in a rigorous manner. Overall, author said evidence suggests partnerships work. He cited his previous work in 2010, which found that only public-public partnership was positively associated with effectiveness, efficiency, and equity; and Provan and Milward (1995) who did not examine outcomes.

Frey, B.B., Lohmeier, J.H., Lee, S.W., & Tollefson, N. (2006). Measuring collaboration among grant partners. *American Journal of Evaluation, 27*(3), 383-392.
- The authors presented the "Levels of Collaboration Scale," examined its reliability, and suggested a format for graphically displaying the results.
- The authors explained that the scale is important because the complex concept of collaboration is difficult to translate into valid and reliable instruments that can measure changes over time.
- Different models for the stages of collaboration were presented. Across all models, at the lowest level is little or no collaboration and at the highest level is full collaboration or unification. There are several similar models although they include different definitions and numbers of stages. A seven-stage model would include coexistence, communication, cooperation, coordination, coalition, collaboration, and coadunation.
- Data collected with the "Levels of Collaboration Scale" can be presented with a collaboration map which the authors explained can be useful and persuasive for partners.
- The authors stated that reliability estimates suggest the tool may be appropriate for measuring change although further study is needed.

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Gajda, R. (2004). Utilizing collaboration theory to evaluate strategic alliances. *American Journal of Evaluation, 25*(1), 65-77.

- Guide on collaboration and formative assessment, with particular attention to cases where collaboration is both a process for completing work and an outcome of the work. The author argued that formative evaluation during the beginning of a collaboration can increase the likelihood of effectiveness.
- Collaboration should be thought of as an intervention and an outcome.
- The author asserted that collaboration can be powerful and effective, but acknowledged that a consistent definition does not currently exist.

Glisson, C., & Hemmelgarn, A. (1998). The effects of organizational climate and interorganizational coordination on the quality and outcomes of children's services systems. *Child Abuse and Neglect, 22*(5), 401-421.

- Quasi-experimental longitudinal study (3 years) to examine the effects of organizational variables (including interorganizational coordination) on service quality and outcomes in a sample of public children's services offices located in pilot counties and matched control counties.
- Organizations with more positive climates served children who demonstrated the greatest improvements in psychosocial functioning. Organizational climate was also positively associated with service quality.
- Of most importance for the current review, increased service coordination was negatively associated with service quality. The authors posited that increased service coordination might decrease the quality of services because responsibility is diffused.

Hicks, D., Larson, C., Nelson, C., Olds., D.L., & Johnston, E. (2008). The influence of collaboration on program outcomes: The Colorado nurse family partnership. *Evaluation Review, 32*(5), 453-477.

- An evaluation of 16 community coalitions in multiple regions in Colorado involved in the implementation of a nurse-family partnership program. Coalitions had between five to 20 participating stakeholders.
- The authors found that higher levels of process quality in the coalitions were related to lower levels of attrition for families participating in the nurse-family partnership program.
- The feature of process quality that this study focused on was an open and credible decision-making process in which all members are treated equally. Process quality was measured with a 3-jtem subscale of a 15-item survey and hierarchical linear modeling was used to assess the relationship between process quality and program attrition.

Hughes, J., & Weiss, J. (2007). Simple rules for making alliances work. *Harvard Business Review*, 14, 1-10.

- A framework for making corporate alliances work, pointing out that corporate alliances increase every year but more than half of alliances (60%-70%) fail.
- Alliances can be difficult because they are often comprised of companies that compete with each other. Minimizing conflict and agreeing on what to do typically takes a substantial amount of time. Instead of finding one way to do things, differences between companies should be leveraged to maximize the effectiveness of the alliance.
- Metrics should measure alliance progress not just alliance goals. Find leading indicators because alliances usually require a large effort before the desired outcomes are apparent.

Kania, J., & Kramer, M. (2011). Collective impact. *Stanford Social Innovation Review*, 35-41.

- Framework for collective impact is presented.
- Organizations have collaborated for years without results because the collaborations lack important elements. For example, one of the most frequent reasons collaborations fail is a lack of supporting infrastructure. Coordinating takes time, which the participating organizations do not have.
- Includes examples of the success of collective impact, but the methodology is not presented. Examples include an education reform in Cincinnati organized with collective impact that led to increases in high school graduation rates, 4th grade reading and math scores, and the number of preschool children prepared for kindergarten); an instance of cleaning a watershed where after 15 years 1,000 acres had been conserved or restored; and an effort in Massachusetts to decrease childhood obesity that led to a statistically significant decrease in obesity.

Kramer, M.R., & Pfitzer, M.W. (2016). The ecosystem of shared value. *Harvard Business Review, 94*(10), 81-89.

- Collective impact framework from a business perspective, including several key elements of collective impact.
- Described successes with collective impact: a fertilizer company based in Norway brought organizations together to develop an agricultural corridor in Africa and increased the company's sales in the region by 50% while simultaneously increasing the incomes of hundreds of thousands of farmers in the region. Walmart could not source enough recycled plastic for use in packaging, so they created a cross-sector coalition to invest in recycling infrastructure in U.S. cities

(for instance, adding recycling carts), which saved Walmart money by reducing the cost of packing but also reduced the amount of waste of going to landfills.

- The first element of collective impact, a common agenda, is defined as a shared vision for change and the solution, can take up to a year of intensive work to establish. Across all elements, collective impact requires long-term vision and commitment of resources.
- Dedicated backbone support must be provided by a separate, independently funded staff managed by a single or several organizations. While the participating companies can provide funding, training, or technology to support the backbone operations, they cannot provide the staff.

Longoria (2005). Is inter-organizational collaboration always a good thing? *The Journal of Sociology and Social Welfare, 32*(8), 123-138.

- Literature review on definitions and outcomes of interorganizational collaboration. Fifteen different definitions of collaboration were identified, highlighting that it would likely be difficult to establish a standardized definition.
- An assumption of positive outcomes is contained within some of the definitions of collaboration, despite the fact that this assumption is not supported by current research.
- Includes recommendations for organizations considering collaboration: discuss the meaning and assumptions of collaboration, challenge the idea that interorganizational collaboration might be a cost-saving strategy, use data to drive decisions, and share the outcomes of the collaboration to strengthen the research base.

Natural Resources Institute. (2014). *Agricultural Extension: Advisory Services and Innovation.* University of Greenwich: Medway, England.

- Guide focused on collaboration in agricultural extension. While initially the term "extension" meant the movement of information and technology from researchers to farmers, more recently it was re-defined as movement that occurs in both directions to better meet the needs of farmers.
- The National Resources Institute completed work that indicates that agricultural extension work should be multi-faceted, multi-institutional, and share information among stakeholders through varied information services.
- In Lesotho collaboration between farmers, local governments, extension services, researchers, and the private sector supported farmer participatory research, which is leading to improved methods of poultry production and increased incomes. Work in Malawi and Tanzania, which improved two-way communication has also enhanced agricultural productivity.

Preskill, H., Parkhurst, M., & Splansky Juster, J. (2014a). *Guide to evaluating collective impact: Assessing progress and impact.* Collective Impact Forum. Retrieved from https://collectiveimpactforum.org/resources/guide-evaluating-collective-impact

- Guidance on planning and implementing an evaluation in the context of collective impact.
- Evaluation should be intentional but flexible and responsive.
- Important to use different evaluation measurements and activities as the initiative develops. In the early years use a developmental evaluation approach, in the middle years use formative evaluation, and in the later years use summative evaluation. Potential evaluation questions and indicators are identified.

Preskill, H., Parkhurst, M., & Splansky Juster, J. (2014b). *Guide to evaluating collective impact: Learning and evaluation in the collective impact context.* Collective Impact Forum. Retrieved from https://collectiveimpactforum.org/resources/guide-evaluating-collective-impact

- Guide on evaluating collective impact, a more intensive and more structured process than collaboration. Collective impact has five core conditions: 1) common agenda, 2) shared measurement system, 3) mutually reinforcing activities, 4) continuous communication, and 5) backbone function.
- The backbone function, something that is unique to collective impact (compared to collaboration), refers to a dedicated staff that works to coordinate participating organizations and agencies.
- "Impact" refers to the client outcomes. CI engages different organizations connected to the client outcomes that the group is trying to improve, including people whose lives are affected by the problem.
- CI is not an easy process. The process of change with collective impact typically involves three stages: the early years, middle years, and later years. It is not until the later years that measureable changes in outcomes can be expected.

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Proulx, K.E., Hager, M.A., & Klein, K.C. (2014). Models of collaboration between nonprofit organizations. *International Journal of Productivity and Performance Management, 63*(6), 746-765.

- Literature review on models of collaboration, as well as motivations for and barriers to effective collaboration, and methods to ensure a successful collaboration.
- Motivations: resource dependence, external pressure on organizations, and the desire to acquire information or expand program services.
- Barriers: demands for organizations to interact in ways that they would not have to otherwise, organizations are often encouraged to collaborate with organizations that they compete with for resources (an issue since each organization could benefit from the failure of the other). In cases like this, there must be clear lines of communication from the joint program office including specific guidelines for the division of tasks.

Provan, K.G., & Milward, H.B. (1995). A preliminary theory of interorganizational network effectiveness: A comparative study of four community mental health systems. *Administrative Science Quarterly, 40*(1), 1-33.

- Comparative case study of interorganizational networks in four cities' mental health delivery systems. The researchers used qualitative and quantitative data to create a description of each case, which they compared. Outcomes were not examined.
- The researchers found that the most effective networks were coordinated centrally, through a single core agency. These agencies were able to monitor and control activities.
- Resources played a role in network effectiveness. Network effectiveness in environments with fewer resources ranged from low to moderate, but in environments with more resources, their effectiveness was not capped.

Selden, S.C., Sowa, J.E., & Sandfort, J. (2006). The impact of nonprofit collaboration in early child care and education on management and program outcomes. *Public Administration Review, 66*(3), 412-425.

- Comparative case study of 20 organizations that provide early care and education services. Qualitative and quantitative data was collected to examine variation in collaboration and the effect of collaboration on management, program, and client outcomes.
- Among other findings, the researchers found that the organizations that participated in a three-way collaboration (compared to two-way) had higher staff compensation and higher classroom quality, although they also had a higher rate of staff turnover.
- Some methodological concerns include how concepts were operationalized/measured and the conclusions that were drawn given the design. The authors concluded that interagency collaboration could help programs achieve these outcomes although due to the lack of data collected prior to the start of the collaborations, it seems equally as likely that organizations that have the capacity to collaborate with one or more organizations might already be higher on these metrics.

Stuart, J.B., Walker, J.T., & Minzer, A. (2011). *A critical review of partnership capacity and effectiveness: Moving from theory to evidence.* Cambridge, MA: Abt Associates Inc.

- Literature review to explore if partnerships are effective in improving outcomes and whether stronger partnerships are more effective.
- The partnership literature focuses on the rationale, processes, and advantages of partnering (internal outcomes) as opposed to changes for the individuals served (external outcomes). When effectiveness is examined, it is either usually with qualitative studies or correlational analyses with cross-sectional data. Outcomes are often assessed with subjective measures.
- The authors concluded that the current research on partnerships is not rigorous enough to merit claims of effectiveness.

Thompson, A.M., & Perry, J.L. (2006). Collaboration Processes: Inside the black box. *Public Administration Review, 66*, 20-32.

- A construct of collaboration was presented in which collaboration is comprised of five dimensions: 1) governance, 2) administration, 3) organizational autonomy, 4) mutuality, and 5) trust and reciprocity.
- The dimensions were defined as follows: governance refers to joint decision-making processes and structures, administration refers to structures that serve key administrative functions, autonomy refers to the idea that organizations need to see value for their own organization in the collaboration, mutuality refers to the idea that organizations must experience mutual benefits, and trust and reciprocity refer to the extent to which individual partners will act collaboratively because other partners are doing the same.

- The authors argued that the five dimensions can be applied in a comprehensive approach, although they explained that it will take time and they cautioned that collaboration is costly and should not be undertaken without careful consideration and education.

Thompson, A.M., Perry, J.L., & Miller, T.K. (2009). Conceptualizing and measuring collaboration. *Journal of Public Administration Research and Theory, 19*(1), 23-56.
- The authors tested the construct validity of their multidimensional model of collaboration (governance, administration organizational autonomy, mutuality, and trust and reciprocity).
- A survey was completed by 1382 directors of organizations that participated in collaboration.
- The authors indicated that their analyses suggested confirmation for the five dimensions of collaboration.

Woodland, R.H., & Hutton, M.S. (2012). Evaluating organizational collaborations: Suggested entry points and strategies. *American Journal of Evaluation, 33*(3), 366-383.
- Collaboration Evaluation and Improvement Framework (CEIF). The CEIF framework is comprised of: 1) operationalizing the construct of collaboration, 2) identifying and mapping communities of practice, 3) monitoring stages of development, 4) assessing levels of integration, and 5) assessing cycles of inquiry.
- The majority of collaborations do not succeed because they do not take the time to develop the process and structures for collaboration. This process takes time and planning.
- Case studies comprise a large body of the literature in support of organizational collaboration and, as such, collaboration is an "underempiricized" construct.
- Attributes of collaboration: collaborations form with shared purpose, collaborations take place in complex systems, collaboration is developmental, collaboration varies in terms of level and degree of integration, and collaboration entails cycles of inquiry. Collaborative efforts fall along a continuum from cooperation, to coordination, and finally to collaboration, depending on the purpose of the partnership.