

BEST PRACTICES FOR DATA FACILITATORS AND DATA TEAMS

March 2017



In the following report, Hanover Research discusses best practices related to the implementation of data facilitators and school-based and district-level data teams.

TABLE OF CONTENTS

Executive Summary and Key Findings	3
INTRODUCTION	3
KEY FINDINGS.....	3
Section I: Implementing Data Facilitators and Data Teams	5
DATA FACILITATORS AND DATA TEAMS.....	5
Selecting Data Facilitators	6
Training Data Facilitators.....	8
Establishing District Data Teams.....	10
Establishing School-Based Data Teams	12
DATA FACILITATOR MODELS.....	14
Dedicated Data Facilitator Model.....	16
Integrated Data Facilitator Model	19

EXECUTIVE SUMMARY AND KEY FINDINGS

INTRODUCTION

Even within data-driven districts, teachers often struggle to collect, analyze, and act on data. Educators may not be familiar with the data literacy concepts and skills required to effectively leverage the current variety of student data and make data-informed decisions.¹ District case studies confirm that internal capacity is just as important as specific hardware and software, if not more so. School staff require support through a combination of leadership, policies, partnerships, and professional development to use data effectively and foster data-focused school climates.²

To support school districts in efforts to improve data literacy and data-informed instruction among staff, Hanover Research (Hanover) examines best practices related to data facilitators and data teams. This report, which follows a broader report for a partner on best practices related to data informed instruction, relies on recommendations and findings from a variety of secondary literature, as well as materials from school districts and state departments of education. The report provides the following information in one large section:

- **Section I: Implementing Data Facilitators and Data Teams.** Hanover presents an overview of data facilitators and data teams and then discusses best practices in selecting and training data facilitators. This report also discusses features of school-based data teams, and concludes with two models that districts can use to incorporate data facilitators and teams in their district/schools.

KEY FINDINGS

- **District structures for perpetuating a strong data culture rely on individual “data facilitators” and district- and site-level “data teams.”** Data facilitators often serve as liaisons between the two levels (district and site) to manage ongoing professional development and resource needs, and may also serve on the data teams.
 - A district-level data team may include data managers, instructional leaders, and other district staff, as well as representatives from schools, grade levels, and different school-based professional roles. As part of their role in designing professional development for school-based staff, district-level data team members may serve as data facilitators who initially lead and participate in school-level data teams.
 - Districts may employ a designated (full-time) data facilitator who supports a single or multiple school sites, or may integrate the responsibilities of data facilitation

¹ Means, B., E. Chen, et al. “Teachers’ Ability to Use Data to Inform Instruction: Challenges and Supports.” U.S. Department of Education, 2011. pp. 61–62. <https://www2.ed.gov/rschstat/eval/data-to-inform-instruction/report.doc>

² Means, B., C. Padilla, and L. Gallagher. “Use of Education Data at the Local Level From Accountability to Instructional Improvement.” U.S. Department of Education, 2010. p. 29. <https://www2.ed.gov/rschstat/eval/tech/use-of-education-data/use-of-education-data.pdf>

into those of an existing school administrator, instructional coach, teacher, or team of school-level staff.

- **All staff serving on data teams, particularly those who serve as facilitators, must be well versed in the data resources and methodologies used in the district.** These data leaders must continually develop skills and knowledge over time through professional learning and experience. Good candidates also demonstrate leadership in instructional improvement, are skilled collaborators and team facilitators, and have a basic knowledge of school data and assessments.
- **While experts recommend that a data facilitator lead school-based data teams, the role of the data facilitator is to build school-level capacity.** As such, data team members will grow to take on many of the initial roles of the data facilitator and lead the rest of the school in data-informed decision-making.
- **Data facilitators must adjust the cycle of data inquiry to adapt to diverse experience levels among team members.** When working with novice school-based data teams, a data facilitator should begin with small, short-term data cycles (i.e., a few weeks). Novice school-based data teams may also require a data facilitator to lead the group for an extended period, whereas more experienced data teams may require less guidance and support.
- **Districts and schools have access to a variety of free and inexpensive resources to guide in-district training for data facilitators.** For example, a data coach's guide published by Love et al. in 2008 provides detailed background information related to data-informed decision-making as well as detailed directions for leading meetings with school-based data teams. Similarly, several state departments of education have produced resources to inform district trainings of data facilitators and guide the interactions between data facilitator and school-based data teams. In addition, districts may consider paid in-person and online workshops and trainings, which typically span multiple days and can include additional on-site support from external experts.

SECTION I: IMPLEMENTING DATA FACILITATORS AND DATA TEAMS

DATA FACILITATORS AND DATA TEAMS

Data facilitators support effective data use within and across schools. To guide teachers as well as other school staff and administrators in data-informed decision-making, experts recommend that districts establish a data facilitator to lead data use at the school-level. Data facilitators — also commonly referred to as “data coaches,” “technology specialists,” “system certified trainer,” or “staff development teachers”³ — are trained individuals who help administrators and teachers use and interpret student data to make decisions.⁴ Data facilitators may establish and participate in school data teams made up of administrators, teachers across grade levels and subjects, instructional coaches, and support staff. A data team may craft its school’s unique vision for data use and serve as a resource for other school staff members.⁵

As the role of the data facilitator is to build school-level capacity, the school-based data team will ideally take on many of the initial roles of the data facilitator and lead the rest of the school in data-informed decision-making.⁶ Consequently, as Figure 1.1 describes, many of the responsibilities of the data facilitator and school-based data team overlap. Rather than have sole responsibility over data analysis, data facilitators provide staff with the necessary knowledge and skills to make data-informed decisions independently.⁷ As the National Association of Elementary School Principals (NAESP) states, “teachers need to improve their data literacy knowledge and engage in effective ongoing assessment of student learning, collective analysis, and problem solving.”⁸ Similarly, the National Center for Educational Evaluation cautions that “[o]verreliance on data facilitators can result in educators failing to develop the necessary knowledge and skills, which could lead them to misunderstand or misuse data. Once staff become comfortable with data use, however, it is likely that facilitators will not need to provide the same level of guidance and support as indicated earlier.”⁹

³ Means, B., C. Padilla, et al. “Implementing Data-Informed Decision Making in Schools - Teacher Access, Supports and Use.” 2009. pp. 27–28. <https://www2.ed.gov/rschstat/eval/tech/data-informed-decision/data-informed-decision.doc>

⁴ Hamilton, L. et al. “Using Student Achievement Data to Support Instructional Decision Making.” National Center for Educational Evaluation, 2009. p. 46. http://repository.upenn.edu/cgi/viewcontent.cgi?article=1298&context=gse_pubs

⁵ “Using Student Achievement Data to Support Instructional Decision Making.” National Association of Elementary School Principals, 2011. p. 5. http://www.naesp.org/sites/default/files/Student%20Achievement_blue.pdf

⁶ Hamilton et al., Op. cit., pp. 34–35.

⁷ Ibid., pp. 46–47.

⁸ “Using Student Achievement Data,” NAESP, Op. cit., p. 7.

⁹ Hamilton et al., Op. cit., pp. 34–35.

Figure 1.1: Roles of the Data Facilitator and Data Team

ROLE	DESCRIPTION	SAMPLE RESPONSIBILITIES
Data Facilitator	A data facilitator is an individual charged with helping schools or districts use data effectively to make decisions. Often, data facilitators organize school-based data teams, lead practitioners in a collaborative inquiry process, help interpret data, or educate staff on using data to improve instructional practices and student achievement.	<ul style="list-style-type: none"> ▪ Model data use and interpretation, tying examples to the school's vision for data use and its learning goals ▪ Model how to transform daily classroom practices based on data-driven diagnoses of student learning issues ▪ Assist staff with data interpretation by preparing data reports and related materials ▪ Train and support staff on using data to improve instructional practices and student achievement
Data Team	As school-based groups of educators who come together to analyze data and help one another use data effectively, data teams often include a school's principal, instructional leader(s), and several teachers. Such teams may lead teachers in using achievement data to identify and respond to students' learning needs through instructional modifications.	<ul style="list-style-type: none"> ▪ Provide resources and support for data analysis and interpretation, such as information about professional development sessions and access to necessary technologies ▪ Encourage educators to use data in their daily work by modeling data use strategies ▪ Create incentives to motivate staff to analyze data (e.g., a monthly award for excellent data use, recognition in the school newsletter) ▪ Participate in grade-and subject-level meetings to ensure that structured collaboration time is used effectively

Source: National Center for Educational Evaluation¹⁰

SELECTING DATA FACILITATORS

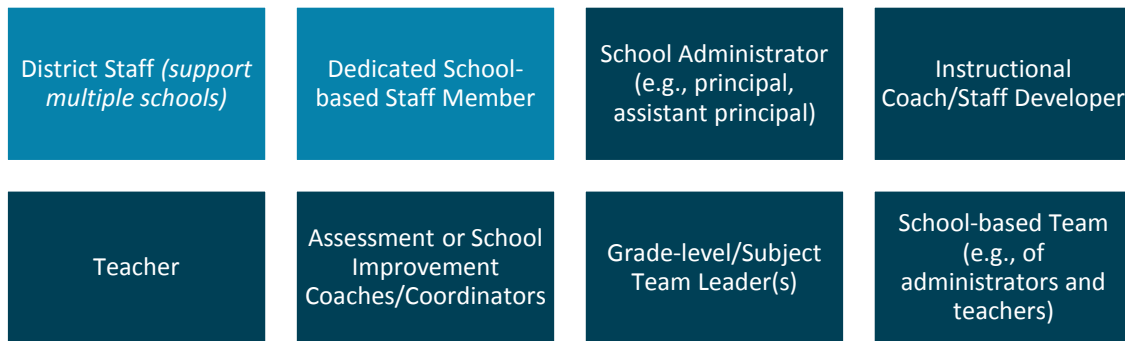
The position of data facilitator varies across districts according to specific needs and available resources. In a 2016 guide to becoming an effective data coach (i.e., facilitator), the Michigan Department of Education (DOE) finds no federal or state guidelines related to the staffing of data coaches.¹¹ The National Center for Educational Evaluation observes that, “depending on the size and available resources of the school and district, data facilitators may be full-time teachers who provide coaching to other staff, district staff members who support multiple schools in data use, or a dedicated school-level staff person supporting all teachers in the building.”¹² Figure 1.2 lists common staffing options for data facilitators. While the majority of the options involve a school-based employee assuming the added responsibilities of a data facilitator, the two options indicated in light blue are dedicated staff members as data facilitators.

¹⁰ Figure text quoted verbatim (or, in the case of the “Sample Responsibilities,” adapted) from: Ibid., pp. 31, 35, 47.

¹¹ “Guide to Becoming an Effective Data Coach.” Michigan Department of Education, 2016. p. 6.
http://www.michigan.gov/documents/mde/Guide_to_Becoming_an_Effective_Data_Coach_2016.01.28_514371_7.pdf

¹² Hamilton et al., Op. cit., pp. 34–35.

Figure 1.2: Common Data Facilitator Staffing Options



Source: JSD, Research for Better Teaching, Love et al., Michigan DOE¹³

As the National Center for Education Evaluation notes, a data facilitator needs “not only expertise with data analysis but also an ability to train and encourage other staff in the data use process.”¹⁴ A 2014 article in *Education Policy Analysis Archives* recommends that districts consider more than data skills when hiring a data facilitator, noting that “instructional content knowledge, strong interpersonal expertise, and knowledge of adult learning are likely needed for coaches to successfully support teachers in using data to inform instructional decision making.”¹⁵ To that end, the Michigan DOE recommends that data coaches have the following knowledge and abilities:¹⁶

- Knowledge and ability to manipulate data;
- Ability and understanding of how to present data in an applicable and functional manner;
- Knowledge or willingness to learn to use multiple data collection and analysis tools; and
- Instructional background to clearly connect data to instructional decision-making.

However, in their widely cited guide for data coaches, Love et al. note that “few people come with the full complement of knowledge and skills that are desirable for data coaches.”¹⁷ As such, data coaches may need to develop skills and knowledge over time through professional learning and experience. Love et al. consequently recommend that in selecting data coaches, districts look for candidates with the qualifications listed in Figure 1.3.

¹³ Figure adapted from: [1]Love, N. “Taking Data to New Depths.” *JSD*, 25:4, 2004. p. 23.

See also: [2] “Coaching for Sustainable School Improvement.” Research for Better Teaching, 2016.

http://www.rbteach.com/sites/default/files/rbt.cssi_course_description.12may2016.pdf

[3] Love, N. et al. *The Data Coach’s Guide to Improving Learning for All Students: Unleashing the Power of Collaborative Inquiry*. 1st ed., Corwin, 2008. p. 39.

[4] “Guide to Becoming an Effective Data Coach,” Op. cit., p. 6.

¹⁴ Hamilton et al., Op. cit., pp. 46–47.

¹⁵ Huguette, A., J. Marsh, and C. Farrell. “Building Teachers’ Data-Use Capacity: Insights from Strong and Developing Coaches.” *Education Policy Analysis Archives*, 22:52, June 23, 2014.

¹⁶ Bullets quoted verbatim from: “Guide to Becoming an Effective Data Coach,” Op. cit., p. 6.

¹⁷ Love et al., Op. cit., p. 39.

Figure 1.3: Characteristics of an Effective Data Facilitator

- In Selecting Data Coaches, look for someone:*
- With the **sanction or authority of the district or school administration** to play the coach role and to lead data teams: data coaches can only operate if their role is officially sanctioned and they have the authority, time and legitimacy to convene and lead Data Teams.
 - Who demonstrates **leadership in instructional improvement**—either as an effective and collaborative teacher, an instructional coach, or an administrator who garners the respect of others and is an instructional leader.
 - Who has a **moral commitment to ensuring equity and learning for all students**: the role calls for people who are passionate about equity, willing to stand up for their beliefs, and committed to strengthening their own cultural proficiency.
 - Who is a **skilled collaborator and team facilitator**.
 - Who has **basic knowledge of school data and assessments**: data coaches do not need to be experts in statistics or complex data management systems, but they should know the basics of interpreting results and not be afraid of data. Basic knowledge of Excel is a plus.
 - Who has a **willingness to take risks, make mistakes, and continuously learn**.

Source: Love et al.¹⁸

TRAINING DATA FACILITATORS

Districts and schools have access to a variety of free and inexpensive resources to guide in-house training for data facilitators, as well as access to cost-based, out-of-district workshops and trainings.

TRAINING GUIDES

Data facilitators and other educators have access to a variety of free and paid resources to build knowledge and skills related to data-informed decision-making. For example, Love et al. note that their 2008 guide titled *The Data Coach's Guide to Improving Learning for All Students: Unleashing the Power of Collaborative Inquiry* “is designed to prepare data coaches to carry out their role.”¹⁹ The guide provides background information relevant to data-informed decision-making, as well as detailed directions for leading 19 meetings with school-based data teams on effective data use. The authors recommend that district leaders convene a study group for district data coaches to learn the material in the guide before meeting with school-based data teams. In this collaborative setting, data facilitators can learn and practice the tasks together, building competencies related to data use before leading data teams through the process.²⁰

Data facilitators require knowledge of effective data use practices, as well as the ability to share this knowledge. Figure 1.4 lists publicly available resources published by or for state DOEs that aim to train and/or guide data facilitators to promote effective data use. Districts

¹⁸ Figure bullets quoted verbatim from: Ibid.

¹⁹ Ibid., p. 40.

²⁰ Ibid.

may use these guides as foundations for internal trainings for data facilitators, as well as to structure interactions between data facilitators and school-based data teams.

Figure 1.4: Public Resources to Guide Data Facilitators and Data Teams

RESOURCE	DESCRIPTION
Delaware Data Coaches Guide (2011) ²¹	This 12-page framework was published by Wireless Generation, a company that produces educational innovations, for participants in the Delaware Race to the Top Data Coaches Program. The framework aims to guide data coaches (i.e., facilitators) as they work with school-based professional learning communities (i.e., data teams). The document describes six phases centered on specific sets of skills related to data use, each of which last for 10 to 14 weeks.
Guide to Becoming an Effective Data Coach (2016) ²²	The Michigan Department of Education developed this 74-page guide for data coaches specifically in schools and districts awarded a School Improvement Grant (SIG). The guide discusses the role of a data coach, collaboration, and other responsibilities, strategies, and recommendations relevant to data coaches.
District and School Data Team Toolkit (2012) ²³	The Washington School Information Processing Cooperative (WSIPC), the Office of Superintendent of Public Instruction (OSPI), and Public Consulting Group (PCG) developed this 331-page toolkit to support district leaders in realizing a shared vision for data use. Specifically, the guide is “designed to promote the skills and knowledge necessary to form an effective cadre of district and school-level data teams and build their capacity to effectively use the inquiry process and data to inform decisions.”
Using Data to Guide Action for School Improvement: Facilitator’s Guide (2012) ²⁴	This 52-page guide corresponds with a more general resource on using data to guide action for school improvement published by the Nebraska DOE with guidance from McREL. While the general resource focuses on effective data use, this guide provides instructions specifically for a data facilitator, including how to build and lead a data team.

Source: See figure citations

EXTERNAL TRAINING OPTIONS

Paid in-person and online workshops and trainings for data facilitators typically span multiple days and can include additional on-site support. Districts may alternatively choose to send dedicated data facilitators and other educators to fee-based professional development workshops. For example, an upcoming training (Summer 2017) from Research for Better Teaching (RBT), a provider of professional development around data use, consists of an 18-hour program plus two four-hour webinars. The program, hosted by Nancy Love (co-author of the widely cited guide discussed above) and developed with support from the Massachusetts Department of Elementary and Secondary Education, is for school and district instructional coaches. The program aims to instruct participants how to:²⁵

²¹ “Delaware Data Coaches Guide.” Wireless Generation Professional Services. 2011. <http://redclay.schoolwires.net/cms/lib010/DE01903704/Centricity/Domain/100/RNEPLCdatacoachguide.pdf>
²² “Guide to Becoming an Effective Data Coach,” Op. cit.
²³ “District and School Data Team Toolkit.” Washington School Information Processing Cooperative; Washington Office of Superintendent of Public Instruction, 2012. <http://www.k12.wa.us/cedars/data/pubdocs/fulltoolkit.pdf>
²⁴ “Using Data to Guide Action for School Improvement: Facilitator’s Guide.” Nebraska Department of Education, 2012. <http://www.esu1.org/downloads/misc/Facilitator.pdf>
²⁵ Bullets quoted verbatim from: “Coaching for Sustainable School Improvement,” Op. cit.

- Implement the components or activities of instructional coaches, including enrolling teachers, setting student goals, explaining and modeling instructional practices, observing lessons, debriefing, and refining teacher practice;
- Strengthen coaching communication skills for developing healthy relationships with teachers, such as listening, questioning, and being a witness to the good;
- Apply research on helping behaviors;
- Incorporate principles that establish coaching as a partnership; and
- Advocate for systemic conditions that support coaching such as collaboration with principals, protected time to work with teachers, confidentiality agreements, and a strong professional culture.

The Data Wise Project at the Harvard Graduate School of Education similarly offers multi-day, on-campus and online trainings for data facilitators, as well as for educators more broadly, in data-informed decision making. Programs are intended for individuals, as well as school- and district-level teams with varying levels of experience with data use.²⁶

Note that an in-person multi-day workshop model for data facilitators has been a standard for over a decade. For example, the National Science Foundation (NSF) in 2004 offered a 12-day workshop series over one and a half to two years with an on-site follow-up and additional coaching in subsequent years.²⁷

ESTABLISHING DISTRICT DATA TEAMS

A district-level data team may include data managers, instructional leaders, and other district staff, as well as representatives from schools, grade levels, and different school-based professional roles.²⁸ This team provides support for the entire district by coordinating or fulfilling the functions listed in Figure 1.5.²⁹ In addition to providing professional development opportunities for school-level data teams, district-level data team members may serve as data facilitators who initially lead and participate in school-level data teams.³⁰ Note that while “districts often pursue a systemic approach, with an overarching data team at the district level that works with school-wide teams and school-level subject and content data teams,” districts may also forgo the creation of a district-level team and rely solely on school-level teams, often led (at least initially) by a dedicated data facilitator.³¹

²⁶ “The Data Wise Portfolio.” Harvard Graduate School of Education, 2017.

https://issuu.com/professionaleducationhgse/docs/dw_onesheet?e=26282853/42176497

²⁷ Love, Op. cit., p. 23.

²⁸ [1] “Using Data to Guide Action for School Improvement.” Nebraska Department of Education, 2012. p. 31. <http://www.esu1.org/downloads/misc/DataESU1Guide.pdf> [2] From “Getting Ready” section in: “District and School Data Team Toolkit.” Washington School Information Processing Cooperative; Washington Office of Superintendent of Public Instruction, 2012. p. 4. <http://www.k12.wa.us/cedars/data/pubdocs/fulltoolkit.pdf>

²⁹ Ibid.

³⁰ Ibid., p. 50.

³¹ “Using Data to Guide Action for School Improvement,” Op. cit., p. 5.

Figure 1.5: Essential Functions of a District Data Team

Vision and Policy Management

- Creates and articulates the vision for data use
- Sets and models expectations
- Implements and upholds policies for data use in the district

Data Management

- Identifies data to be collected
- Manages data infrastructure and access
- Designs meaningful data displays

Inquiry, Analysis, and Action

- Selects or develops models for inquiry and data use that will be used district-wide
- Models the inquiry process publicly

Professional Development

- Provides training and professional development to support district departments, principals, school data teams, and teachers in their use of data
- Uses data to identify professional development needs

Monitoring and Communication

- Monitors the progress of the district toward achieving its vision for data use
- Establishes the lines of communication necessary for the sharing of results and best practices
- Communicates with stakeholders to determine their specific needs for data and training

Source: WSIPC and Washington OSPI³²

In initial meetings, the team should establish group norms, clarify its purpose and goals, and develop a process to continually monitor and assess the group’s interactions.³³ Districts without a history of collaborative school improvement efforts may spend the first six to nine months building a culture that supports collaboration, inquiry, and data-informed decision-making.³⁴ Regarding team size, the Nebraska DOE recommends that membership be limited to a maximum of 15 people. To ensure that all team members are committed and understand the time commitment, some data teams ask members to sign an agreement regarding team norms, purpose, and goals. During team meetings, members should assign/fulfill the roles listed in Figure 1.6; roles may rotate or remain static across meetings and members may hold multiple roles simultaneously.³⁵

³² Figure bullets quoted verbatim from “Getting Ready” section in: “District and School Data Team Toolkit,” Op. cit., p. 4.

³³ “Using Data to Guide Action for School Improvement,” Op. cit., p. 6.

³⁴ Love et al., Op. cit., p. 343.

³⁵ “Using Data to Guide Action for School Improvement,” Op. cit., pp. 31–33.

Figure 1.6: Data Team Roles and Responsibilities

- **Facilitator:** Guides the team through the stages of data inquiry. When decisions need to be made, this person will lead the team through decision making and consensus building. If the team does not appoint referee or planner roles, the facilitator will also maintain responsibility for the tasks associated with those roles.
- **Time-keeper:** Responsible for keeping the meeting moving according to the schedule by beginning and ending on time.
- **Recorder:** Responsible for taking notes during the meeting and reporting and disseminating to all team members following the meeting.
- **Referee:** Responsible for keeping the team on task during the meeting.
- **Planner:** Responsible for communicating with members about upcoming meetings and responsibilities.
- **Active Participant:** All team members will be engaged participants in the team meetings, actively listening and contributing to discussions.

Source: Nebraska DOE³⁶

ESTABLISHING SCHOOL-BASED DATA TEAMS

Districts and schools commonly create school-based data teams to support schoolwide data use aligned with the district’s and school’s visions. District-level data teams have the responsibility of supporting existing school-based data teams, as well as creating and guiding teams in schools as needed.³⁷ When creating new school-based teams, Love et al. recommend that districts consider carefully whom to include. District leaders and/or data facilitators should meet with school principals, curriculum directors, teachers, and other key stakeholders to agree on the scope of the work of each school-based data team. Love et al. stress that buy-in and support from building principals and/or other key administrators (e.g., department chairs) is particularly important for the team’s success and sustainability. If applicable, the school assessment or data coordinator should also be informed and prepared to support school-based data teams.³⁸ Figure 1.7 lists the five essential functions of school-based data teams. Note that these functions parallel those of district-level data teams but at the school-level.

³⁶ Figure title and bullets quoted verbatim from: Ibid., p. 33.

³⁷ From “Getting Ready” section in: “District and School Data Team Toolkit,” Op. cit., p. 14.

³⁸ Love et al., Op. cit., p. 33.

Figure 1.7: Functions of School-Based Data Teams

FUNCTION AREA	DESCRIPTION
Vision and Policy Management	Articulate the vision for data use in the context of their unique school setting, model district-wide expectations for data use, and formulate school-based policies that are consistent with those of the district.
Data Management	Manage the collection of school-based data and work with the district data team to ensure that relevant data are available to support the inquiry process at the building level.
Inquiry, Analysis, and Action	Develop focusing questions and analyze data to make school-based decisions about curriculum, instruction, and assessment.
Professional Development	Build the capacity of all school staff to collaboratively use data and the inquiry process to improve teaching and learning at the school, grade, and classroom levels.
Monitoring and Communication	Work with the district data team on monitoring the results of the school improvement plan and other school-based interventions and on district-level focusing questions.

Source: WSIPC and Washington OSPI³⁹

Recommendations regarding the size of a school-based data team vary. For example, while the Nebraska DOE recommends a maximum of 15 members for all data teams (both district-level and school-based), the WSIPC and Washington OSPI recommend that school-based data teams only include (at least initially) three to five members.⁴⁰ In choosing members for school-based data teams, district-level data team members should consider:⁴¹

- Who currently has the responsibility for leading and supporting data use in your school?
- Who has a solid understanding of programs, initiatives, and efforts taking place across the district?
- Who, at the school-level, shares a deep commitment to improving the learning of all students and the practice of all adults involved in their education?

A data champion with positional authority should lead an initial school-based data team. The Nebraska DOE notes that this data champion is often the building principal or the assistant principal of instruction. A data champion ensures that the data team has the necessary school-level resources to function effectively, promotes the work of the data team schoolwide, and supports data-informed decision-making and change. A *data manager* may also participate in the team to manage the more technical aspects of data coordination and use. Figure 1.8 lists additional potential members of a school-based data team.

³⁹ Figure content quoted verbatim from: “District and School Data Team Toolkit,” Op. cit., p. 14.

⁴⁰ [1] “Using Data to Guide Action for School Improvement,” Op. cit., pp. 31–33. [2]

⁴¹ Bullets quoted verbatim from “Getting Ready” section in: “District and School Data Team Toolkit,” Op. cit., p. 15.

Figure 1.8: Potential School-based Data Team Members

<ul style="list-style-type: none"> ▪ Data champion (chairperson) ▪ Principal or assistant principal ▪ School-level data manager ▪ Special education coordinator and/or guidance counselor 	<ul style="list-style-type: none"> ▪ Department heads and/or lead teachers ▪ Literacy and mathematics coaches ▪ Teachers
---	---

Source: Nebraska DOE⁴²

Additional school-based data teams may also form, including grade-level and content area data teams, based on staff needs. While the functions of such within-school teams will be narrower than those of a schoolwide team, teams will follow similar processes of data-based inquiry. In addition, as with a schoolwide team, the Michigan DOE recommends that a data facilitator monitor and provide guidance for these within-school teams.⁴³

DATA FACILITATOR MODELS

Districts may provide data facilitators for schools (e.g., members of a district-level data team), staff a school-based dedicated data facilitator, or train school-based staff and administrators to act as data facilitators.⁴⁴ Regardless of the staffing model, a data team facilitator “serves as both a fully engaged participant and as a process guide.”⁴⁵ For schools with more experience in data-informed decision making, the role of facilitator might rotate throughout the group.⁴⁶ The facilitator is responsible for team meeting logistics (e.g., planning meetings ahead of time, providing an agenda, delegating group responsibilities) and for guiding the team through the process of data inquiry and data-informed decision-making. This second responsibility is especially critical for school-based data teams with limited data experience. If school and/or district administrators are not part of the data team, the facilitator may additionally act as the team’s liaison with the administration.⁴⁷

Data facilitators should tailor initial data-based inquiries to the experience of the data team. For example, the Nebraska DOE recommends that “when working with novice teams, it is best to start small, with short-term data cycles centered around simple, low-variable questions,” whereas more advanced teams may choose to work on “a number of short-term cycles concurrent with one or two long-term cycles.”⁴⁸ As an example, Figure 1.9 lists a series of short-term data cycle questions.⁴⁹

⁴² Figure bullets quoted verbatim from “Getting Ready” section in: Ibid.

⁴³ “Guide to Becoming an Effective Data Coach,” Op. cit., pp. 42–44.

⁴⁴ Means, Padilla, et al., Op. cit., p. 17.

⁴⁵ “Using Data to Guide Action for School Improvement: Facilitator’s Guide.” Nebraska Department of Education, 2012. p. 2. <http://www.esu1.org/downloads/misc/Facilitator.pdf>

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ According to the Nebraska DOE, “a short-term cycle might consider actions that can take place and be measured in the space of a few weeks, while a long-term cycle might consider actions that will take place and be measured over the course of many months, semesters, or even years.” Ibid., p. 6.

⁴⁹ Ibid.

Figure 1.9: Examples of Short-Term Data Cycle Questions

EXAMPLE	DATA SOURCES REQUIRED FOR THE EXAMPLE
<i>What is the correlation between (variable) and (variable) [in subgroup]?</i>	
What is the correlation between benchmark math tests and NeSA-M scores?	Benchmark scores that directly precede the NeSA-M scores
How are attendance rates related to NeSA scores for 5th graders?	NeSA scores, for 5th grade only; Attendance rates, for 5th grade only
<i>How are (sub group) performing in (content area) as measured by (test) over (time period)?</i>	
How are 4th-grade girls performing in reading as measured by DIBELS over the last three years?	DIBELS scores from the last three years for 4th-grade girls only
How have Title I students performed in reading over the course of this school year, as measured by interim course grades?	Course grades from this school year for Title I students only

Source: Nebraska DOE⁵⁰

Data facilitators should maximize their time spent directly supporting teachers, administrators, and other school staff. A resource for data facilitators and coaches in the DoingWhatWorks library, a resource created by WestEd, notes that “the role of the data facilitators/coaches may not be well defined,” especially initially.⁵¹ A data facilitator may work primarily with individual teachers on instructional issues, or support data use through leading school-based data teams. In both scenarios, however, the data facilitator should focus on enabling educators to analyze data with the goal of adjusting instruction. To increase data facilitators’ interactions with data teams and individual teachers, DoingWhatWorks created an activity log for data facilitators to record and adjust how they spend their time. For example, data facilitators who find that they spent more time doing administrative work in their first month than directly supporting data teams and teachers may choose to reorganize their schedule to spend more time working directly with teachers.⁵² Figure 1.10 presents a sample activity log below.

⁵⁰ Figure content quoted verbatim from: “Using Data to Guide Action for School Improvement,” Op. cit., p. 66.

⁵¹ “Data Facilitator/Coach: Activity Log.” WestEd. p. 1. <https://dwwlibrary.wested.org/resources/725>

⁵² Ibid.

Figure 1.10: Sample Data Facilitator Activity Log

DATE AND DURATION	ACTIVITY	FOCUS	PARTICIPANTS	NEXT STEPS	POTENTIAL IMPACT
4/03/16 (1 Hour)	Led cycle of instructional improvement	Grade 1 fluency assessment results	Grade 1 teachers	Modify instruction and test hypothesis	Teachers will better understand how to engage in a cycle of instructional improvement
4/03/16 (1 hour)	Created data glossary	Building data literacy	All staff	Introduce glossary and seek common understanding of terminology	Contributes to schoolwide vision for data use to have a common understanding of data terminology
4/04/16 (2 hours)	Modeled how students can use their own data	Helping students examine their writing errors	Grade 3 students and teachers	Students set learning goals for next writing assignment	Students will better understand their strengths and weaknesses

Source: WestEd⁵³

Districts typically support school-based data teams either through staffing a dedicated data facilitator or by adding the responsibilities of a data facilitator to those of an existing district or school employee.⁵⁴ A 2014 article in *Education Policy Analysis Archives* notes that these two options “have been at the forefront of these efforts to build teacher data-use skills and knowledge.”⁵⁵ The following subsections discuss these two prominent data facilitator models in turn — that is, dedicated and integrated.

DEDICATED DATA FACILITATOR MODEL

Districts may staff a data facilitator or coach to support a single school or multiple schools. Dedicated data facilitators often adopt multiple roles, including “assist[ing] in connecting teachers with student data, interpreting data, applying new information to classroom practice, facilitating constructive dialogue, and identifying instructional responses.”⁵⁶ Based on need and available resources, a district might staff two dedicated data facilitators to support all 10 of its elementary schools, as was the case in one U.S. DOE study, or assign a single data facilitator to work with teachers and data teams in each school individually.⁵⁷ Dedicated data facilitators may also specialize in supporting teachers in specific subject areas. For example, Canton City School District in Ohio staffed separate data coaches to support teachers in either math or science across two high schools.⁵⁸

⁵³ Figure content quoted verbatim with minor changes from: *Ibid.*, p. 2.

⁵⁴ Means, Padilla, et al., *Op. cit.*, p. 20.

⁵⁵ Huguet, Marsh, and Farrell, *Op. cit.*, p. 3.


⁵⁶ *Ibid.*

⁵⁷ Means, Padilla, et al., *Op. cit.*, pp. 27–28.

⁵⁸ Love et al., *Op. cit.*, p. 40.

As another example, in 2015, Greater Amsterdam School District in New York transitioned three tenured school staff members to serve as data coaches across four district schools. One of these staff serves as a full-time data coach and supports teachers across two schools; two staff members serve as part-time data coaches who retain responsibilities as an AIS Math instructor and a special education math support teacher, and each support a single school.⁵⁹ Figure 1.11, below, lists the responsibilities of data coaches at Greater Amsterdam School District, the majority of which center on direct support and work with teachers and school administrators.

Figure 1.11: Role of Data Coaches (Greater Amsterdam School District)

- **Member of building leadership.** Serve as part of the building leadership team and be responsible for the disaggregation and analysis of a variety of school-wide data to improve and meet the unique academic and social needs of all students.
 - **One-on-one support of principal and teachers.** Work directly with the principal and teachers supporting them in implementing student centered learning practices aligned with the curriculum.
 - **Additional teacher support.** Train teachers to utilize a variety of data to make timely decisions about curriculum, assessment, instruction and attendance needs to support the goals of the building and the Greater Amsterdam School District.
 - **Data team guidance and support.** Support the Professional Learning Communities and data team processes within the building and share out information at the District level as well.
 - **Data analysis and support.** Monitor results of both state and local testing and assist schools with analysis of the results providing the starting point to guide teachers and administrators to continue the process.
- 

Source: New York State Education Department⁶⁰

Districts may also contract with data facilitators temporarily to provide intensive training in data use to school-based teams. As part of the Race to the Top initiative, educators across Delaware, Rhode Island, and Hawaii have worked with data coaches who enable school-based data team members to use data effectively, to then share that knowledge with colleagues. Districts hired professional data coaches who worked with groups of educators across multiple full-day training sessions to enable school-based data teams to act as their school's own team of data facilitators.⁶¹ Figure 1.12 describes four examples in detail.

⁵⁹ "The Data Coach: Greater Amsterdam School District." Greater Amsterdam School District, 2015. p. 3.

<http://www.nysed.gov/common/nysed/files/Data%20Coach%20-%20Board%20Meeting%20Present.pdf>

⁶⁰ Figure content (excluding bolded text) quoted verbatim from: Ibid., p. 4.

⁶¹ Fagnani, S. "Drilling down on Education Data: Coaches Guide Teachers in Mining Information That Drives Achievement." *District Administration*, October 2014. <https://www.districtadministration.com/article/drilling-down-education-data>

Figure 1.12: District Models of Data Use Facilitation and Coaching

DISTRICT/SCHOOL	MODEL	DESCRIPTION
<p>Red Clay Consolidated School District (DE)</p>	<ul style="list-style-type: none"> ▪ School-based data teams meet twice a week for 45 minutes. ▪ District-level data coaches attend meetings once or twice a month. 	<p>Red Clay began using data coaches supplied by the Delaware DOE in 2010. A year prior to beginning work with data coaches, the district established professional learning communities (PLCs) at the school-level, which met during two 45-minute sessions each week. In the following year, the district-level data coaches met with PLCs once or twice each month. Data coaches helped PLCs to analyze state assessment data, identify areas of success, opportunities for growth, and adjust instructional practices.</p>
<p>Raymond C. LaPerche Elementary School (RI)</p>	<ul style="list-style-type: none"> ▪ School-level data coach conducts 10-day training for school-level data team. ▪ School-level data team instructs colleagues in effective data use with oversight from the data coach. 	<p>This elementary school in Smithfield Public Schools now holds three “data days” each year during which teachers all analyze student achievement data to identify students requiring additional support. In July 2013, the school began working with a data coach, provided through a statewide contract with Amplify, an instructional technology and data-focused company. The data coach worked with a school-level PLC, training a small group of teachers over 10 days to act as data facilitators to their colleagues. The coach also observed PLC members train other teachers and provided feedback.</p>
<p>Cranston Public Schools (RI)</p>	<ul style="list-style-type: none"> ▪ District-level data coach organizes school-level data teams and conducts 10 full-day training sessions. ▪ School-level data teams instruct colleagues in effective data use and receive ongoing support from the district. 	<p>CPS worked with a data coach from Amplify for one year as part of Race to the Top. The coach helped each school to form data teams comprised of administrators and five teachers and subject specialists. The district organized its 20 schools into groups of four, allowing the data coach to work with four school-level data teams at a time over 10 full-day data training sessions. School-level data teams continue to receive support (including professional development) from the district’s data coordinator.</p>
<p>Ka’u-Kea’au-Pahoa Complex Area (HI)</p>	<ul style="list-style-type: none"> ▪ District-level data coach trains school administrators and teachers in effective data use. ▪ School-level data teams serve as data facilitators for colleagues, who meet regularly to discuss data in PLCs. 	<p>A district data resource expert trained principals, vice principals, and teachers in effective data use. District schools then built school-level data teams to serve as data facilitators for colleagues. Grade-level teachers meet weekly in PLCs “to discuss data points, including student achievement, behavior and engagement.”</p>

Source: *District Administration*⁶²

⁶² Figure content adapted from: Ibid.

INTEGRATED DATA FACILITATOR MODEL

In an integrated data facilitator model, school administrators, instructional coaches, teachers, and other school-based staff assume the responsibilities of a data facilitator, in addition to maintaining their regular duties. For example, one district included in a series of case studies by the U.S. DOE designated a vice principal as one school’s data coach. With support from a school-based technology coordinator, the vice principal would meet with teams of teachers to provide access to schoolwide data and guide data use. The vice principal received support from the district director of student accountability, particularly in the area of developing and providing professional development on data use and data-informed instruction.⁶³ However, the U.S. DOE finds that mentor teachers and instructional coaches often have an advantage over principals and other administrators in the role of data facilitator because “they are not responsible for evaluating teachers.”⁶⁴

Perhaps consequently, districts appear to designate a variety of instructional coaches as data facilitators more commonly than they designate school administrators as such. For example, Spokane Public Schools in Washington adds the responsibilities of a data facilitator to those of existing general instructional coaches, including “collaborating with teachers to analyze formative and summative student achievement data,” and “assisting teachers with the use of data to improve student learning.”⁶⁵ Similarly, Alamance-Burlington School System in North Carolina merges the responsibilities of a data coach with those of existing academic coaches.⁶⁶

The schedule of an instructional coach’s data use responsibilities varies across schools and districts. At one elementary school included in a district case study by the U.S. DOE, teams of teachers began meeting monthly with the new instructional coach, as opposed to their previous schedule of meeting every three months.⁶⁷ The U.S. DOE highlights a second example of content area coaches working with teams of teachers at a different elementary school:⁶⁸

During weekly cluster meetings, math and literacy coaches alternate leading the discussion, which generally involves data. At one meeting, for example, the math coach may lead the teachers in a discussion about student performance and then in brainstorming about strategies for addressing their students’ needs. At another meeting the literacy coach may lead teachers in looking at all the performance data

⁶³ Means, Padilla, and Gallagher, Op. cit., p. 37.

⁶⁴ Ibid., p. 69.

⁶⁵ “Instructional Coaching Model.” Spokane Public Schools, 2010. p. 5.

<http://swcontent.spokaneschools.org/cms/lib/WA01000970/Centricity/Domain/629/Instructional%20Coaching%20Model%20FINAL%20-%206.10.pdf>

⁶⁶ “Academic Coach Evaluation Tool 13-14.” Alamance-Burlington School System, 2013.

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=16&cad=rja&uact=8&ved=0ahUKewjVgr2ku6TSAhWLsFQKHUJGCpl4ChAWCDowBQ&url=http%3A%2F%2Fwww.abss.k12.nc.us%2Fcms%2Flib02%2FNCO1001905%2FCentricity%2FDomain%2F1574%2FAcademic%2520Coach%2520Evaluation%2520Tool%252013-14.docx&usg=AFQjCNEBo9pfmtdBSLeIXBfMrcSHAU8f9Q&sig2=K6Ega5Mlvmg_4LSOnBbfCw&bvm=bv.147448319,d.cGw

⁶⁷ Means, Padilla, and Gallagher, Op. cit., p. 70.


⁶⁸ Quoted verbatim from: Ibid., pp. 69–70.

available on one particular student. At this kind of meeting, a teacher will bring a student’s literacy folder, which includes state and district assessments, writing samples, teacher-student interviews, and other data. The teachers and the coach brainstorm together about how to work with that particular student based on this data.

Instructional coaches acting as data facilitators may also support multiple schools and/or have additional responsibilities. For example, of the nine instructional coaches supporting Western Dubuque Community School District in Iowa, two support multiple schools and six have additional responsibilities. Specifically, instructional coaches serving district elementary schools have additional responsibilities related to “At-Risk/Poverty,” “Continuous Improvement,” and instructional technology. Instructional coaches work with the district Curriculum Department and their building principal to plan and deliver professional development on 15 days devoted to professional learning across the year. In addition, instructional coaches lead monthly days of collaborative professional development, which include conversations on data, assessments, and instructional needs.⁶⁹

Instructional coaches with data facilitation responsibilities may also receive regular training from the district. Figure 1.13 describes the training model for instructional coaches at Jeffco Public Schools in Colorado, where the coaches receive monthly trainings.

Figure 1.13: Instructional Coaches as Data Facilitators (Jeffco Public Schools)

Jeffco Public Schools in Colorado, as of 2013, has full-time instructional coaches at all 95 district elementary schools and across 19 middle schools. Instructional coaching forms the foundation of the district’s professional development program. Consequently, the district trains coaches in multiple roles, including as “data coaches, instructional and curriculum specialists, change agents, and school improvement specialists.” 

- **Monthly training for instructional coaches.** Coaches receive a full day of training from the district each month. In addition, the district provides a joint training session for instructional coaches and the principal of each school so that coaches and principals have the tools to design and provide tailored professional learning opportunities at the school-level.
- **Teacher-focused support.** The Jeffco Public Schools coaching program is dynamic, continually evolving to meet the needs of site educators. For example, in 2013 the district implemented “student-centered coaching cycles” in which coaches worked with teachers in four-to-six-week cycles.

Source: Learning Forward⁷⁰

⁶⁹ “Instructional Coaching Handbook.” Western Dubuque Community School District, 2014. p. 10.

<http://www.wdbqschools.org/Downloads/Instructional%20Coaching%20Handbook%202015.pdf>

⁷⁰ Figure content adapted from: Straughn, P. “Data, Coaching Programs Improve Jeffco Instructional Practices.” *Learning Forward*, Spring 2013. p. 3. <https://learningforward.org/docs/default-source/learning-system/lf-spring-13-straughn.pdf>

PROJECT EVALUATION FORM

Hanover Research is committed to providing a work product that meets or exceeds client expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.

<http://www.hanoverresearch.com/evaluation/index.php>

CAVEAT

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties that extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every client. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Clients requiring such services are advised to consult an appropriate professional.



4401 Wilson Boulevard, Suite 400

Arlington, VA 22203

P 202.559.0500 F 866.808.6585

www.hanoverresearch.com