DATA LITERACY WORKBOOK

For On-Site Visit Volunteers

Prepared for Nebraska Department of Education

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HANOVER RESEARCH

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INTRODUCTION

The Nebraska Department of Education (NDE) maintains an accreditation system that requires schools to engage in a Continuous Improvement Process (CIP). Among the accreditation requirements, Section 009 of Rule 10 dictates that schools must have a CIP that assesses school quality. Specifically:[1]

> A systematic on-going process [that] guides planning, implementation, and evaluation and renewal of continuous school improvement activities to meet local and statewide goals and priorities. The school improvement process focuses on improving student learning. The process includes a periodic review by visiting educators who provide consultation to the local school/community in continued accomplishment of plans and goals.

Section 009 of Rule 10 states that external teams must visit schools as part of the accreditation process. These external teams—comprised of volunteers approved by the host school and external team leader— review another school's progress, which schools undergo at least once every five years.[2] Importantly, these teams receive a school profile and engage with various data to examine progress towards school goals. As such, external teams must have strong data literacy skills. Because external team members may differ in experiences regarding data use, the Nebraska Department of Education (NDE) would like to support these volunteers in using data during site visits to enable constructive reviews and continuous school improvement recommendations.

Hanover Research (Hanover) presents this Data Literacy Workbook to support NDE in facilitating data literacy, which guides external teams in using school data to inform CIP-driven observations and reports. Individuals may use this workbook to prepare for and as a reference during and after site visits. Further, host school educators can leverage this workbook to understand what data are useful during site visits and how others will engage with data. Ultimately, this document aims to facilitate the effective use of data for site visits where all participants have a consistent understanding of data use for continuous improvement.

OVERVIEW

This toolkit, organized to align with the **Host School and Team Lead Responsibilities Handbook** on planning and conducting external team site visits:[3]

✓ Presents critical steps that must take place before site visits based on best practices and NDE accreditation and CIP specifications;

✓ Describes how external teams should engage with data during site visits in the context of NDE accreditation and CIP needs;

✓ Prepares external teams to synthesize data findings and host schools to use recommendations to advance school progress; and

✓ Links to a select set of resources that visiting external teams and host schools can leverage to increase their readiness for and improve their completion of site visits within the CIP.

AUDIENCE

This toolkit supports external teams who conduct site visits for the NDE accreditation process. Team members may use the toolkit when preparing for visits to guide expectations and when conducting site visits to increase the effectiveness of their contributions. Members of host schools may also use this toolkit for information on what the visiting teams expect from the process and what information to provide.

PREPARING FOR EXTERNAL TEAM VISITS

↕👆 Preparing for Site Visits at a Glance

The greater the intentionality of a learning visit, the more responsive the resulting feedback and actions will be to teachers' needs.[4] Consequently, learning visit protocols should direct observers to identify and assess specific instructional strategies and elements that connect to outlined foci and serve as evidence for attaining defined goals.[5] Such directions will depend on multiple logistical and procedural considerations.[6]

Confirming the Purpose and Logistics

Preparing for external team visits requires the external team leader and host school leader to confirm high-level information (e.g., the purpose of the visit) and minute details (e.g., dates and times, participant names, the agenda).[7] **Receiving and understanding the purpose of the site visit is important for external team members because it provides context for where a school is within its school improvement plans and prevents participants from evaluating schools instead of analyzing progress**. Understanding the site visit purpose also enables external team members to affirm progress and motivate school staff or offer direction and corrective actions.[8] The figure below contains the purposes of site visits.

External Team Visit Purposes

Assist the school in selecting or fulfilling school improvement goals and plans by adding an outside, objective view of the school improvement procedures

Enlist the professional advice of colleagues from outside the district

Increase the depth of understanding for moving forward to achieve school improvement goals
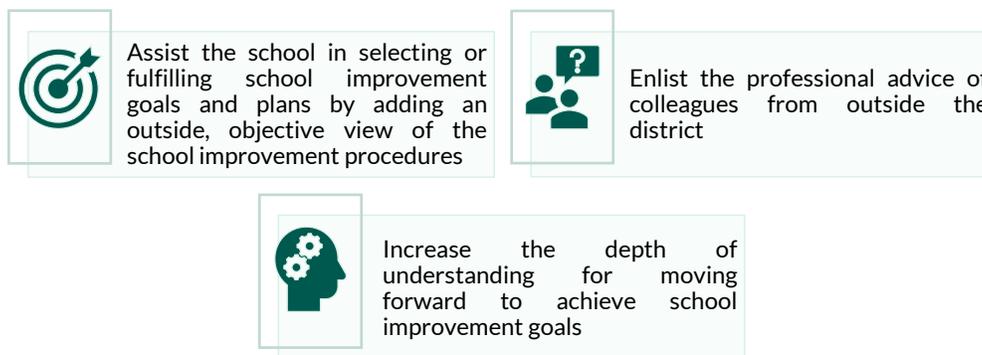
Source: Nebraska Department of Education[9]

Typically, external team members also enter site visits with a focus on and expertise in a particular school goal and can further incorporate data team best practices to increase site visit effectiveness in advancing school goals.[10] Teams must also ensure that members feel prepared for their role and understand what practices are and are not appropriate and equitable when working with data.[11] Guiding questions for this phase of the data review process include:[12]

- Why is this work necessary?
- Who does the work benefit?
- How does it benefit the community at large?
- Who can the process/product harm?

Once external and host school leaders confirm the visiting team members and prepare to begin gathering and reviewing data, the team may participate in self-assessment activities to determine their and the group's readiness for working with school data.[13] Open and closed-ended reflection and assessment activities appear in the following two activities:

- **Data Use and Collaboration Anticipation Guide**
- **Team Readiness Tool**

DATA USE AND COLLABORATION ANTICIPATION GUIDE

<u>Directions</u>: Before working with Host School data, On-Site Visit volunteers should assess their readiness for working with data by using this guide. The External Team discusses responses and readiness during the Orientation Meeting prior to the On-Site Visit.

To use this guide, read each of the numbered items presented below. Then, circle the appropriate answer choice indicating whether you agree or disagree with the statement given your current knowledge of and exposure to student data.

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1. I understand how a typical student performs in a specific grade or subject.	**Agree**	**Disagree**
2. I can recognize variations in student performance based on assessment and achievement data.	**Agree**	**Disagree**
3. I am confident in my ability to use student data to develop differentiated instruction and offer additional supports.	**Agree**	**Disagree**
4. I am comfortable talking about data with peers, students, and administrators.	**Agree**	**Disagree**
5. I can use data to determine the growth that students have made over time.	**Agree**	**Disagree**
6. I can distinguish between different forms of data (achievement, growth measures, criterion, and state standards).	**Agree**	**Disagree**
7. Student data can be used to identify issues that they are currently experiencing in their learning.	**Agree**	**Disagree**
8. I can use data to diagnose potential causes for student performance issues.	**Agree**	**Disagree**
9. I believe it is important to collaborate with colleagues to implement actions supporting student achievement based on data.	**Agree**	**Disagree**
10. I understand how to use data to determine if instructional changes were effective.	**Agree**	**Disagree**
11. I know where to locate data on students' academic achievement, attendance, and behavior.	**Agree**	**Disagree**

12. I use data on a regular basis to inform my instructional planning.	**Agree**	**Disagree**
13. I know how to evaluate data to assess student performance by subgroup (e.g., students with disabilities).	**Agree**	**Disagree**
14. Data literacy is an important skill for all teachers to have to maximize student achievement.	**Agree**	**Disagree**
15. I can explain instructional data to my peers during collaborative team time.	**Agree**	**Disagree**

Source: Wayne County Regional Educational Service Agency, Washington Office of Superintendent of Public Instruction, Washington School Information Processing Cooperative, and Public Consulting Group[14]

TEAM READINESS TOOL

<u>Directions</u>: Please provide a brief reflective response to each question below. On-Site Visit teams will complete this activity, and discuss responses during the Orientation Meeting.

In what ways should faculty and staff use data to help guide their decisions? What should you look for/ask during your visit to ensure faculty and staff use data-based decision-making?
What do you know about the data for this school system? (e.g., demographics, perceptions, student performance, programs)? Do you have any implicit or explicit biases when reviewing this data? How can you address them?
What is your level of familiarity with the following Nebraska materials and metrics that will be used and analyzed? AQuESST Tenets, Comprehensive Needs Assessment (2.0), NeMTSS, and Victoria Bernhardt's "Multiple Measures", etc.
Describe your previous involvement with Continuous Improvement? Include any relevant coursework and participation at the school level.
What specific strengths do you bring to an On-Site Visit Team?
What are the barriers associated with data use? How might you address or work through these barriers?

Source: Office of Community College Research and Leadership, University of Illinois at Urbana-Champaign[15]

Obtaining Data

At least two weeks before each site visit, external team members should request logistical information, school data, and improvement plan if the host school has yet to send it. **This information enables external team members to initiate their in-person review knowing how the school is performing on paper, the direction in which the school aims to go, and how the visit will proceed**.[16] Specifically, NDE advises host schools to communicate the following documents, as relevant:[17]

- The agenda for the visitation day(s);
- The **school profile**;
- The school mission;
- The improvement goals; and
- The draft of an action plan that includes strategies selected to support the improvement goals and related staff development plans.

Schools may and are encouraged by NDE to categorize data for school improvement into four areas: perceptions, student performance, school processes, and demographics. Considering these four areas, rather than solely student performance, provides additional perspectives on school operations and areas for improvement. Specifically, the school profile provides the data that external team members need to understand school performance in isolation and relative to CIP goals. The following figure presents questions that current and longitudinal data in these areas, or measures, help to answer. As described by Victoria Bernhardt, the four measures help data teams examine the effect of schools on student achievement, "define the questions we want to ask, and focuses us on what data are necessary in order to find the answers."

Questions Answered Using School Data

MEASURES	CURRENT DATA	LONGITUDINAL DATA
Demographics	How many students are enrolled in the school this year?	How has enrollment in the school changed over the past five years?
Perceptions	How satisfied are parents, students, and/or staff with the learning environment?	How have student perceptions of the learning environment changed over time?
Student Learning (i.e., performance)	How did students at the school score on a test?	Are there differences in student scores on standardized tests over the years?
School Processes (i.e., programs)	What programs are operating in the school this year?	What programs have operated in the school in the past five years?

Source: California Association for Supervision and Curriculum Development[18]

Additionally, the following figure contains common assessment and non-assessment data that teams may review to analyze operations and student outcomes.

Common Data Sources

ASSESSMENT DATA	NON-ASSESSMENT DATA
▪ Statewide tests ▪ Commercial benchmark assessments or screening tools that the district uses with all students in a particular population ▪ Locally developed assessments such as common mid-terms and finals created by district personnel	▪ District financial statements ▪ Human resources tracking systems ▪ Student transportation information

Source: Massachusetts Department of Elementary and Secondary Education[19]

PREPARING FOR EXTERNAL TEAM VISITS

The **Accreditation Section** at the NDE provides Host Schools and On-Site Teams with procedural information in the "**Nebraska Continuous Improvement: Responsibilities of Host Schools and Team Leads**" handbook. The Responsibilities handbook details important planning steps for a successful visit and also promotes the use of data within the four measures (i.e., demographics, perceptions, students learning, school processes) that should comprise the school profile, which external teams review prior to the visit.

Data Categories within the Multiple Measures of Data

DEMOGRAPHICS	PERCEPTIONS	STUDENT PERFORMANCE	PROGRAMS
▪ School Enrollment ▪ Socio-economic Status ▪ Race/Ethnicity ▪ Gender ▪ Attendance Patterns ▪ Mobility ▪ Language Proficiency ▪ Other	▪ Climate Surveys ▪ Parent Surveys ▪ Staff Surveys ▪ Student Surveys ▪ Graduate and Transition Surveys ▪ Technology Surveys ▪ Other Locally Administered Surveys	▪ Norm-Referenced Test—Language Arts ▪ Statewide Writing Scores ▪ District Writing Assessment	▪ Discipline Data ▪ Community Data ▪ Parent Involvement ▪ Academic Programs ▪ Extracurricular Programs ▪ Student Support Programs ▪ Professional Development ▪ Course Offerings ▪ Other

Source: Nebraska Department of Education[20]

Host schools must collect these data efficiently and effectively, and results must provide "complete, accurate, and timely" information in a clear and organized way.[21] When collecting data through an equity lens, the Education Development Center details potential data collection methods and procedures.[22] External accreditation teams should be prepared to review and interpret demographic, perceptual, performance, and programmatic data obtained through these methods.

Data Collection Methods

DATA SOURCES		DESCRIPTIONS
	District Data Systems	▪ Districts use data management systems for accountability and other purposes. School and district-level data include a range of information that can be analyzed by subgroups, including student achievement, demographics, and per-pupil spending. District data also include teacher evaluation and curriculum management systems. ▪ An equity review relies heavily on these information systems.
	District Surveys	▪ Schools and districts conduct their own surveys, such as school culture and climate surveys, youth health and risk behavior surveys, and staff and parent surveys, which are typically implemented annually or biannually. ▪ An equity review can use results from the district surveys, and, if possible, may request to add relevant questions based on the four equity indicators (i.e., achievement status, educational opportunities, social-emotional supports, culture and climate).
	Student Focus Groups	▪ Leaders may conduct focus groups at schools with groups of students to gather data on each of the four equity indicators. Focus groups are a preferred method for gathering data about student beliefs and perceptions because they provide safe spaces among peers where students feel comfortable speaking freely. They allow for deeper discussions on a topic and consensus on issues and root causes. ▪ To ensure a representative sample, selection criteria are subjected to randomization methods within subgroups.
	Surveys	▪ To supplement district surveys, leaders may judiciously administer teacher, administrator, and student surveys to assess the four equity indicators. ▪ To reduce the load on participants, leaders may administer surveys in conjunction with or added onto other formative assessments, such as student classroom exit surveys, teacher professional learning community (PLC) exit surveys, and administrator meeting surveys.

DATA SOURCES		DESCRIPTIONS
	Focus Group Interviews	▪ Focus Group Interviews allow for the in-depth gathering of knowledge from those who know the most within the school community. The Host School Agenda will include interviews with Students, Staff, and Community Stakeholders. Additional groups may include Administration and/or Board Members. ▪ These interviews provide a needed layer of qualitative data that is used to triangulate data from multiple sources.
	Classroom Visits	▪ Classroom visits are critical component of the On-Site Visit and provide an additional source of anecdotal data to solidify themes. Multiple classroom visits by members of the on-site team correlate instructional practices and professional development outlined in the Continuous Improvement Action Plan.
	Educational Ethnography	▪ Educational ethnography is a human-centered examination of education policies and practices. An emerging approach sees policy as a form of sociocultural practice, a system of social relationships, beliefs, narratives, motivations, norms, and understandings. ▪ Traditional research assumes a linear relationship between policy and practice, but a human-centered lens can reveal the role and perceptions of staff, key decision-makers, and other actors in the system. ▪ Building on ethnographic techniques, leaders conduct observations in various settings (e.g., department and PLC meetings, professional development activities, central office meetings). These leaders examine the interaction of diverse individuals and groups in the educational system, thereby providing a holistic understanding of the intersection of equity policies and practices.

Source: Education Development Center[23]

Once teams obtain data, they should compile the information into a **data biography**. A data biography is "a comprehensive background of the conception, birth and life of any data set" and "is an essential step along the path to equity in data science."[24] An example of a **Data Biography Template** appears below, and external teams can adapt the tool to align with their needs and available information.

DATA BIOGRAPHY TEMPLATE

The Data Biography Template is NOT required for External Visits.

Directions: Use the following template as a guide for creating a data biography and adapt column headers as appropriate. If possible, add these questions to the top row of a spreadsheet, as shown in templates accessible **here**, for easy access and use.[25]

DATASET NAME	LINK TO SOURCE	LINK TO STORAGE SOURCE	WHO COLLECTED DATA	WHO OWNS DATA	HOW WAS DATA COLLECTED	SAMPLE SIZE	WHO WAS INCLUDED/ EXCLUDED	COLLECTION DATE(S)	LAST DATA UPDATE	WHY WAS DATA COLLECTED	NOTES ON DATA QUALITY	NOTES ON DATA USE CONDITIONS

Source: We All Count[26]

CONDUCTING EXTERNAL TEAM VISITS

> ↕ 👆 Conducting Site Visits at a Glance
>
> **Learning visit protocols should direct observer actions to help them look for behavioral or environmental indicators of the outlined foci.** This means that protocols—and the accompanying assessment instrument—must direct observers' investigations and attention toward elements of teacher and student behavior and the classroom environment that indicate successful implementation of a target strategy or resource. Generally, observers will want to examine teachers' instructional practices and student actions in response to those practices (e.g., the degree to which students engage in active learning).[27] However, observers must be aware that "precisely what [they are looking for] in an observation is a function of the instructional framework that the school district or state has adopted."[28]

An orientation meeting comprises the initial stage of a site visit for CIP observations. External team members confirm information (e.g., the agenda, the purpose of the visit, the school improvement process), and receive directions regarding the logistics of the visit planned by the Host School. Materials for these actions are located in the "**Nebraska Continuous Improvement: Host School and Team Lead Responsibilities**" handbook.[29]

Discussing Current Goals and Metrics

Following the external team orientation meeting, team members join small group meetings or focus group sessions with school subcommittees or goal committees to discuss accomplishments and future plans.[30] **Critical discussion and examination of school leaders' influence over certain school-wide components allow a data team to frame analysis and further data collection and action.** Structuring questions around the previous section's four data categories or equity indicators can help structure questioning and align actions with current operations.[31] Aligning data questions with existing goals and key performance indicators (KPIs) may support the team in the following ways:[32]

- Help the data team coordinate efforts with other existing teams;
- Help the data team identify data that might be available to inform the inquiry process; and
- Help the data team avoid redundancy when it comes to developing strategies and action steps.

These discussions may also be an opportunity to review the school's current Accountability for a Quality Education System, Today and Tomorrow (AQuESTT) **classification** and alignment with the six **AQuESTT tenets**.[33] Although AQuESTT tenets and classification system pertain to *accountability* rather than *accreditation*, such information can help identify strengths and improvement areas that inform CIP goals and recommendations. As described by AQuESTT:[34]

> Accountability determinations are a method to convey a broad picture of school performance over time, incorporating outcomes for all students. They are designed to highlight each school's strengths and areas where they can improve.

External team members can use the following tool, **Identifying Tenets in Data**, during discussions and observations to reference the AQuESTT tenets and note comments, data, and observations that demonstrate how the school meets or is deficient in a tenet.

IDENTIFYING TENETS IN DATA

This *Identifying Tenets in Data* table is located on the External Team "Landing Page". If available, the team may also use the Host School's findings from the "Comprehensive Needs Assessment (CNA 2.0)

<u>Directions</u>: Use the following table to reference AQuESTT tenets that Nebraska schools should prioritize for state accountability and classification. Then, make notes during focus group conversations and site observations to inform recommendations and the final report.

DOMAIN: *TENET*	DESCRIPTION	RELEVANT DATA	NOTES
Leadership	Strong leaders who are committed to achieving educational equity are critical to the processes of approval, accreditation, accountability, and continuous improvement. Leaders, from school boards to superintendents, principals to teacher leaders, set a vision for achieving educational equity, offering students meaningful access to the educational resources they need at the right moment, at the right level, and with the right intensity to not only reach high expectations for learning, but also to discover and explore their passions and make meaningful connections within the context of their post-secondary interests, careers, and civic lives. Leaders must possess the knowledge, skills, and mindset to systematize equity.		
Success, Access, and Support: *Educational Opportunities and Access*	Each student has access to effective, comprehensive, and continuous learning opportunities that prepare them for ongoing school success, post-secondary education, and career goals.		

DOMAIN: *TENET*	DESCRIPTION	RELEVANT DATA	NOTES
Success, Access, and Support: *Transitions*	Quality educational opportunities focus on effective supports and high-quality collaborations for each student transitioning within, into, and between grade levels, programs, schools, districts, post-secondary education, and careers.		
Success, Access, and Support: *Positive Partnership, Relationships, and Success*	Schools and districts implement best practices in student, family, and community engagement to enhance experiences and opportunities that are culturally inclusive and relevant for each student. Student success and engagement rely on positive partnerships and relationships to fundamentally improve the outcomes for each student, school, district, and community.		
Teaching, Learning, and Serving: *Educator Effectiveness*	Each student is engaged by effective educators throughout their learning experiences, such that schools and districts develop effective teachers and school leaders who establish a culture of success.		

CONDUCTING EXTERNAL TEAM VISITS

DOMAIN: *TENET*	DESCRIPTION	RELEVANT DATA	NOTES
Teaching, Learning, and Serving: *Student Achievement and Growth*	A balanced assessment system that includes results from multiple sources is used to measure student growth and achievement towards Nebraska's content area standards. A balanced assessment system is a necessary component of the instructional process to improve learning and growth for each student.		
Teaching, Learning, and Serving: *Postsecondary, Career, and Civic Readiness*	Upon high school graduation, each student is prepared for success in post-secondary education, career, and life pursuits.		

Source: AQuESTT[35]

Observing Schools

School observations by external teams are not evaluative, and both external team members and host school members must be aware of this fact to avoid tension among those being observed.[36] According to ASCD, school walkthroughs can cause anxiety among teachers despite being nonevaluative: "[w]hen the purpose is murky, or when trust among teachers, principals, and central-office staff is low, walkthroughs are likely to be perceived as compliance checks, increasing distrust and tension."[37] To help diffuse tension, leaders should convey that the observers use a clear protocol, "high-quality data collection instruments," and receive orientation training.[38] This information can help host school teachers understand the purpose and value of the visit and avoid assumptions that it is evaluative.[39]

Generally, site visit observations involve examining the environment and quality of instruction. In its School Visit Learning Walk Protocol, EL Education identifies the following eight components of classroom observations:[40]

- Observe the classroom's physical environment;
- Review student work samples in folders, portfolios, on desks, on display;
- Ask students (if appropriate):
  - What are you learning?
  - Why are you learning it?
  - How do you know if your work is good?
  - What do you do if you need help?
- Focus on stating factual evidence ("I heard…" "I saw…") and refrain from subjective statements ("I liked…");
- Focus on what is actually said or done, as a video camera might record;
- Be as fine-grained and objective as possible in recording observed behavior and verbatim utterances;
- Ensure that each class visit is for a consistent duration; and
- Use observation tools to record data.

Although individual classroom visits are often short (e.g., five minutes), external team members must record observations and qualitative data to inform feedback and recommendations.[41] A "Classroom Visit Note Catcher" is provided in the "**Host School & External Team Leaders Responsibilities**" handbook.

🔍 **Observing Classrooms for Formative Assessments**

Formative assessments guide teachers' instructional planning and delivery, support student engagement and achievement, and direct school and district priorities (e.g., individualized instruction, college and career readiness, response to intervention).[42] Through these ongoing assessments, teachers and students acquire valuable information regarding students' content knowledge and skill proficiencies to determine whether learning activities must be adjusted to help students meet outlined learning standards.[43] Indeed, data collected via formative assessments:[44]

- Help teachers monitor student performance relative to the expected performance outlined in learning standards and as compared to their in-class peers;

- Allow teachers and students to determine what students' level of content knowledge or skills proficiency is at specific points of an instructional sequence; and

- Support teachers' decision-making regarding future adjustments to instruction or the provision of enrichment or interventions to better support students' needs.

Given the importance of formative assessments for student progress, classroom observers may look for teachers adjusting their teaching strategies mid-lesson to ensure student understanding. Teachers should pause instruction to

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ask direct questions and ensure student understanding, as this strategy helps students internalize information. Specifically, when teachers present small amounts of new information, provide guided practice, and ask questions that check for understanding, students often process new content faster, require less reteaching, and integrate knowledge into their long-term memory.[45] Despite brief observations by external teams, observers may see teachers checking for understanding through the following questions: [46]

- How would you summarize this lesson so far?
- What is the main idea of this paragraph?
- Can you explain the directions for this activity in your own words?
- Can you describe your thought process while solving this problem?
- Do you agree or disagree with your classmate's answer? Why?

Analyzing Data and Determining Findings

External team members reconvene following their observations to analyze information, discuss findings, and determine successes and improvement areas.[47] During data team discussions, team members may pose the following questions to deepen their analysis and exploration of school progress.

Data Analysis Discussion Questions

What patterns or inconsistencies are evident across the different data sets?	Do different data sets reveal the same patterns and trends? If not, what can the data team learn from the differences?	How have the data changed over time?	How do the data compare with data from other populations in the district?

Source: Massachusetts Department of Elementary and Secondary Education[48]

Bernhardt's exploration of multiple methods demonstrates how data analyses lead to more nuanced insights when looking at where and how data intersect. By analyzing intersections, teams are more equipped to define questions and focus on data that will lead to answers.[49] The following figure illustrates how connecting data from different measures (i.e., demographics, perceptions, student learning, school processes) can answer potential questions.

How Multiple Measures Can Answer School Improvement Questions

NUMBER OF INTERSECTED MEASURES	MEASURES	SAMPLE QUESTIONS ANSWERED
2	Demographics x Student Learning	Do students who attend school every day perform better on the state assessment than students who miss more than five days per month?
	Demographics x School Processes	What strategies do Grade 3 teachers use with students whose native languages are different from that of the teacher?
	Perceptions x Demographics	Is there a gender difference in students' perceptions of the learning environment?
	Perceptions x Student Learning	Do students with positive attitudes about school do better academically, as measured by the state assessment?
	Perceptions x School Processes	Are there differences in how students enrolled in different programs perceive the learning environment?
	Student Learning x School Processes	Do students who enrolled in active, hands-on content courses this year perform better on standardized achievement tests than those who took the content courses in a more traditional manner?
3	Demographics x Perceptions x Student Learning	Do students of different ethnicities perceive the learning environment differently, and are their scores on standardized achievement tests consistent with these perceptions?
	Perceptions x Demographics x School Processes	What instructional process(es) did the previously non-English-speaking students enjoy most in their all-English classrooms this year?

NUMBER OF INTERSECTED MEASURES	MEASURES	SAMPLE QUESTIONS ANSWERED
	Perceptions x Student Learning x School Processes	Is there a difference in students' reports of what they like most about the school by whether or not they participate in extracurricular activities? Do these students have higher grade point averages than students who do not participate in extracurricular activities?
	School Processes x Student Learning x Demographics	Which program is making the biggest difference with respect to student achievement for at-risk students this year, and is one group of students responding "better" to the processes?
4	Demographics x Perceptions x School Processes x Student Learning	Are there differences in achievement scores for Grade 8 girls and boys who report that they like school, by the type of program and grade level in which they are enrolled?
	Student Learning x Demographics x Perceptions x School Processes	Based on whom we have as students, how they prefer to learn, and what programs they are in, are all students learning at the same rate?

Note: This figure aligns with Bernhardt's four measures, which differ slightly in terminology compared to NDE resources. Namely, student learning (Bernhardt) aligns with student performance (NDE), and school processes (Bernhardt) aligns with school programs (NDE).
Source: California Association for Supervision and Curriculum Development[50]

As demonstrated above, **disaggregating data by demographics and subgroups is common to data analyses. It enables teams to target specific factors and observe how factors manifest throughout a population**. Although disaggregation can be difficult (e.g., highly diverse populations may have small subgroups that get reduced to an "other" category), oversampling, self-identifying options, and cross-tabulating support accurate results.[51] Nonetheless, data teams must be wary of focusing too much on a subgroup that may already be "over-surveyed."[52]

Additional best practices include using proportions and rates, analyzing statistically significant and insignificant outcomes, and disaggregating *opportunities*. Proportion and rates, rather than numbers, provide more accurate comparisons as the results account for differences in subgroup population sizes. Data teams should also review results that demonstrate statistical significance *and those that do not* since small subgroup population sizes may prevent differences from appearing statistically significant. Notably, small differences may indicate unanticipated outcomes and be cause for concern.[53] Furthermore, data teams must disaggregate opportunities to identify other potential patterns and systemic issues and avoid deficit-based thinking.[54]

After disaggregating data, data teams should reflect on what they see and initial reactions before adding local and historical contexts, policies, and systems to the research process. Example reflection questions include:[55]

- Are you comfortable with the completeness and quality of your data, or is additional work needed in this area?
- Did you identify disparities among racial groups in the outcomes you are examining?
- Which stakeholders will you engage to assist in interpreting the data and planning your next steps?

Considering various contexts (e.g., cultural, historical, mathematical, social) and perspectives (i.e., researchers' and data populations') enables data teams to understand their findings as interpretations, decrease the likelihood of subjective findings causing or sustaining inequities, and avoid deficit-based thinking.[56] Understanding research outcomes as interpretations caveats that data team members have personal experiences and biases, and while metrics and indicators show trends, data teams add meaning.

Therefore, viewing outcomes as interpretations allows data teams to demonstrate that "data decisions come from a place of understanding and not one of unintentional ignorance or outright pretending."[57]

Notably, Bernhardt cautions that teams can easily enter "*analysis paralysis* by spending time pulling data together and not spending time using the data."[58] Therefore external teams must remain focused on inquiry questions, the site visit purpose(s), and what standards students are expected to meet.[59] As a general process for facilitating data review meetings, data teams can follow the **D.A.T.A. Protocol for Student Data Analysis** and the associated **D.A.T.A. Protocol Implementation Checklist** to ensure that the review process occurs efficiently and effectively.

The following graphic organizers and questions for inquiry may be used during External Team Orientation and/or writing the External Report for determining Commendations and Recommendations.

D.A.T.A. PROTOCOL FOR STUDENT DATA ANALYSIS

Directions: This document introduces the D.A.T.A. Protocol, a procedure that teachers or data teams can use during data review sessions, during professional learning community (PLC) meetings, and by themselves to analyze student data more effectively.

D **DETERMINE** the focus of meetings. Will teachers be examining data for their whole school, a specific class, or individual students? This determination can be made before every meeting or can rotate based on an established schedule (e.g., every third meeting is devoted to whole school data).

A **ANALYZE** student data to identify growth trends, strengths, and gaps in performance based on the determined meeting focus. Identify if there are mastery differences between student groups or individual students. Pinpoint standards or assessment items that were commonly problematic for students.

T **THEORIZE** root causes for identified growth trends, strengths, and gaps in performance. Are there problems with instructional practices? Is there a specific content item or concept that is especially difficult for students? All meeting attendees should consider the driving factors that are producing specific results.

A **ACT** on consensus theories. Teachers should collaboratively plan and implement instructional actions, modifications, or interventions to address negative growth trends or gap areas in student performance or to sustain areas of established strength. Actions, modifications, and interventions can be applied to individuals or groups of students.

Source Doing What Works, Washington Office of Superintendent of Public Instruction, Washington School Information Processing Cooperative, and Public Consulting Group[60]

D.A.T.A. PROTOCOL IMPLEMENTATION CHECKLIST

<u>Directions</u>: This checklist outlines specific action steps that teachers can take before, during, and after meetings to analyze student data and use student data to inform instructional planning. Use this checklist to assure appropriate actions are taken and support improved collaboration.

DETERMINE	YES	NO
1. Have we determined objectives before meetings to provide enough time to allow individual teachers to prepare?		
2. Have we disseminated a list of required materials and data that meeting participants need?		
3. Have we decided which meeting participants will facilitate analysis and discussion of specified student data (e.g., a team leader) and lead the agenda?		

ANALYZE	YES	NO
4. Have we analyzed and reviewed data collaboratively throughout the meeting?		
5. Have we identified differences in proficiency and mastery between student groups or individual students?		
6. Have we identified common areas of strength and problem areas across the student population (e.g., a specific standard, a given item)?		
7. Have we calculated and evaluated performance growth between comparable assessments and data to assess trends?		

THEORIZE	YES	NO
8. Have we theorized root causes for identified strengths, gaps, and trends?		
9. Have we evaluated potential problems or discrepancies with related instructional activities and materials?		
10. Have we considered non-instructional factors (e.g., attendance, behavior) as root causes for performance issues?		
11. Have we isolated student needs —either group or individual—to target via instructional planning, modifications, and interventions?		

CONDUCTING EXTERNAL TEAM VISITS

ACT	YES	NO
12. Have we brainstormed potential strategies and resources to address student performance needs?		
13. Have we selected strategies and resources via consensus to use with students?		
14. Have we developed an action plan based on student needs to guide instructional planning, modifications, and interventions?		
15. Have we selected the individual(s) responsible for implementing the action plan?		
16. Have we set a timeline for implementing and evaluating the action plan?		
17. Have we determined how to assess the impacts of the action plan on student performance?		

Source: Doing What Works, Washington Office of Superintendent of Public Instruction, Washington School Information Processing Cooperative, Public Consulting Group, Harvard Graduate School of Education[61]

CONCLUDING EXTERNAL TEAM VISITS

↕👆 Concluding Site Visits at a Glance

Following a given learning visit, observers should use the evidence they gathered to engage in reflective conversations among themselves and with the observed staff. Such conversations serve as a vehicle to examine current areas of strength and development and inform related future action steps.[62] In particular, observers will want to determine how their collected data and evidence answer the focus questions of the learning visit before using those answers—together and with observed staff—to establish a plan to improve instructional practice for individual teachers and the broader school system.[63]

Importantly, before transitioning to the final stages of the site visit and reporting process, the Urban Institute underscores that **"[d]ata visualizers and communicators must first thoroughly understand the data they are using, how those data were collected, why they were collected, and who is and is not reflected in those data."[64]** Although the Urban Institute presents this message in the context of forming charts and graphs with diversity, equity, and inclusion in mind, all data users may benefit from ensuring a complete understanding of information before presenting it to key stakeholders.

As external teams conclude their visit, members prepare and deliver an oral exit report, which includes the team's positive observations, concerns, recommendations, and any other pertinent commentary about continuous improvement at that site. This oral exit report is then presented to the host school's steering committee, administration, and other interested parties (e.g., school board, faculty, community members) before becoming a formalized document for the host school and NDE. External teams deliver the written report to the host school and NDE within three weeks of the site visit.[65]

Finalizing Reports

According to best practices literature, data teams must carefully choose the language, charts, images, and platforms to convey interpretations to their audience. Using all data obtained before and during the site visit, external team members compose a final report, which teams must carefully craft to express interpretations accurately and equitably. [66] To successfully disseminate data that later inform initiatives, programs, and other actions, data teams should connect and empathize with their audience. This empathy enables data teams to produce visualizations and stories that present lived experiences that manifest in data more accurately. The following figure presents six practices for ensuring empathy in data communication.[67]

Best Practices for Empathizing with Communities

1 Put people first	Use personal connections to help readers and users better connect with the material	Use a mix of quantitative and qualitative approaches to tell a story
Create a platform for engagement	Consider how your framing of an issue can create a biased emotional response	Recognize the needs of your audience
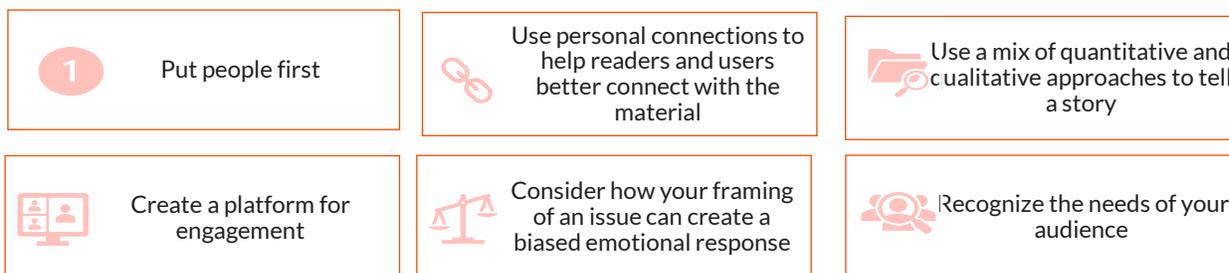
Source: Urban Institute[68]

Additionally, translating data and interpretations into forms of communication requires data teams to consider their audience and content to meet the project's goals and convey outcomes successfully. Understanding the audience is necessary as identities and associated histories and experiences impact how to communicate information to the groups represented in the data.[69] Additional stakeholders who do not

appear in data also factor into communication, and data teams must consider what information is relevant to these groups.[70] Identities and factors to consider in data communication include:[71]

- Race;
- Ethnicity;
- Preferred language;
- Literacy level;
- Culture;
- Religion;

- Gender identity expression;
- Age;
- Sexual orientation;
- Ability; and
- Lived experience with the issue.

Data teams must also craft language and messaging that demonstrates an equity mindset and avoids deficit-based thinking and "victim-blaming," defined by Child Trends as "when persistent differences are attributed to the attitudes, actions, and abilities of an individual or racial and/or ethnic group."[72] Strategies to show equitable practices and avoid victim-blaming include involving analyzed groups in the communication process, contextualizing the presented information, carefully wording information (e.g., writing students with disabilities rather than disabled students), and maintaining transparency regarding the extent of equity considerations throughout the process.[73]

Furthermore, the specific terms and descriptions written in communication tools (e.g., reports) must remain unbiased, respectful, and reflective of current terminology. Titles—often the first words audiences see—and labels are short but must prioritize inclusivity and equity over brevity.[74] According to best practices, the language around data should "[place] numbers in context" and "[name] racism and sexism when it is present in those numbers."[75] The following table highlights examples from the Urban Institute of reframing language to promote equity.

Language Adjustments to Promote Equity

WRITTEN COMPONENT	PROBLEMATIC LANGUAGE	ISSUE	REVISED LANGUAGE	REASONING
Title	"Mental Health in Jail: Rate of mental health diagnosis of inmates"	▪ Ignores the roles racism and discrimination play in how likely incarcerated people are to receive a mental illness diagnosis ▪ Uses the term "inmate," which some have argued is dehumanizing and references people by their crimes and punishments	"Racism in Jail: People of color less likely to get mental health diagnosis"	▪ More accurately reflects the main findings of the research (which focused on racial disparities in the jail system) ▪ Names the forces of oppression at work (racism in prison) ▪ Reference people, not inmates
Labels	"More Poverty"	Not inclusive of different groups: poverty refers to an experience, not a static description	"Larger proportion of people experiencing poverty"	More inclusive
	"More Black"	References skin color, not people	"Larger Black population"	References people

Source: Urban Institute[76]

Additionally, data teams must remain current with the appropriate terms and phrasing for different subgroups to ensure that data and communication tools accurately and respectfully present people and their experiences. However, monitoring current terms and tailoring communication tools to specific audiences presents a complex challenge as different generations often use and are familiar with different terms.[77]

Recommending Actions to Host School Teams

Through data use for a school's CIP, external teams support host schools in understanding demographics, perceptions, student learning/performance, and processes/programs. Bernhardt notes how data uses and outcomes of data use for the CIP include those shown in the following figure.[78]

Data Uses and Outcomes of Data Use

USES	OUTCOMES
▪ Clarify whom schools have as students ▪ Understand where the learning organization is right now on all measures ▪ Consider processes, as well as results ▪ Create a vision that will make a difference for whom schools have as students ▪ Help everyone get on the same page with understanding how to achieve a vision ▪ Know if what the learning organization is doing is making a difference	▪ What data are important for continuous school improvement ▪ How to analyze all types of data for continuous school improvement ▪ How to measure school progress ▪ How to know if efforts are resulting in the changes a school needs and wants

Source: NESA Fall Leadership Conference, Education for the Future, California State University, Chico, Research Foundation[79]

Additionally, with the external team's findings and recommendations in mind, leaders may develop continuous improvement goals and plans using the SMARTIE attributes, which extend the SMART criteria commonly used in strategic planning across sectors by adding inclusivity and equity.[80] When drafting findings and SMARTIE goals, teams should keep in mind the following questions:[81]

- **Specific/Strategic**: Does each goal reflect an important dimension of what the school seeks to accomplish? Does each goal clearly state what is to be accomplished?
- **Measurable**: Does each goal refer to a measurable outcome or opportunity? Does it set a standard that will allow the school to know whether the goal has been met?
- **Attainable/Ambitious**: Does the goal seem reachable given where things are now? At the same time, is it challenging enough that success would mean significant progress for the school?
- **Relevant**: Will attaining this goal make a difference in the quality of students' and stakeholders' lives or school governance and operations? Is the goal aligned with other school improvement goals?
- **Time-Bound**: Has a timeframe been established for achieving the goal? Have shorter-term benchmarks been set so progress can be monitored along the way?
- **Inclusive**: Does this goal invite traditionally excluded individuals to make decisions and contribute in a way that shares power?
- **Equitable**: Does this goal include an element of fairness or justice that seeks to address systemic injustice, inequity, or oppression?

The **SMARTIE Goals Worksheet** supports leaders and stakeholders in translating identified needs and gaps into transparent and impactful goals. The worksheet leads users through guided questions around existing priorities, differences in the desired and current state of performance, expected improvements to outcomes and operations, and the SMARTIE criteria. Notably, this guide may inform external teams in framing findings and recommendations as external teams gain an understanding of how host schools will use the information.

SMARTIE GOALS WORKSHEET

<u>Directions</u>: Use this worksheet to outline goals identified in priority areas. The worksheet guides users in exploring gaps between the school's current performance and its desired state of performance relative to a specific priority. In addition, the worksheet provides space for drafting a goal statement—related to the examined priority and its associated performance gap or inequity—that follows the SMARTIE Goals Framework presented below.

S   Goals are **specific** to the desired outcome and **strategic** in that they reflect an important dimension of organizational priorities.

M   Goals are **measurable** using one or more applicable metrics or assessment tools relative to an established threshold of success.

A   Goals are **attainable** and **ambitious**. They are reachable given current performance but also challenging enough to signify progress.

R   Goals are **relevant** to the needs of the broader population of students, as well as the needs of historically disadvantaged groups.

T   Goals are **time-bound**, having clear checkpoints for stakeholders to track progress and a deadline for goal achievement.

I   Goals are **inclusive** of all stakeholders—particularly those impacted by inequities—in decision-making processes and planned actions.

E   Goals are **equitable** and have explicit language that addresses systemic injustice, inequity, bias, and oppression.

1. What should change about school operations and/or student, staff, and family outcomes to address the existing inequity in the priority area, as well as its root causes?

2. What stakeholder groups will be directly or indirectly impacted by this change?

CONCLUDING EXTERNAL TEAM VISITS

3. What is the expected magnitude of this change (e.g., percentage change)?

4. Do you believe the expected magnitude of this change is reasonable given the current state of your school?

5. When should this change occur by?

6. How do you expect to track progress toward this change, and how do you expect to determine if the change has occurred within the established timeline?

7. Use this space to draft a SMARTIE goal statement.

8. Is the preceding goal statement…

Specific and strategic?	☐	Time-bound?	☐
Measurable?	☐	Inclusive?	☐
Attainable and ambitious?	☐	Equitable?	☐
Relevant?	☐		

Source: The Management Center and Collaborative for Academic, Social, and Emotional Learning[82]

RESOURCES

This section presents key resources published by NDE and external organizations that may inform external team members and host school staff members in conducting accreditation-focused site visits within the CIP framework.

Nebraska Department of Education Resources

TITLE	DESCRIPTION	QR CODE
The Nebraska Framework: A Handbook for Continuous Improvement in Nebraska Schools[83]	This document presents the NDE's system for ensuring continuous improvement in all public schools throughout the state. The content aims to support school staff in establishing and implementing their improvement processes (e.g., setting goals, using data, planning).	
External Team Visit: A Support Guide for Host Schools and External Team Leaders[84]	This guide details leaders' responsibilities before, during, and after external team site visits. Host and external team leaders can leverage this resource to ensure they complete all components of an external review process.	
NeMTSS Framework: Multi-Tiered System of Support Nebraska Framework Document[85]	This document presents the Nebraska Multi-Tiered System of Support framework to ensure stakeholders understand the framework's components and implementation. This guide also connects elements of NeMTSS to AQuESTT tenets.	
Rule 10: Regulations and Procedures for the Accreditation of Schools[86]	This document presents Rule 10, "Regulations and Procedures for the Accreditation of Schools," within the state administrative code. This chapter details how schools are accredited.	
Key Messages: Accountability[87]	This one-page resource from AQuESTT describes why accountability is critical in Nebraska's education system and how a school's performance and accountability results impact school communities.	

Source: Multiple cited within the figure.

External Resources

TITLE	DESCRIPTION	QR CODE
District Data Team Toolkit[88]	Based on a theory of action cycle, this toolkit guides district data teams through seven modules on using data to improve schools. Although designed for district-level data teams, this document provides information and activities that any data user can leverage.	
District and School Data Team Toolkit[89]	This toolkit guides data users through effective data practices beginning with establishing a shared vision for data use followed by the Cycle of Inquiry and Action.	
Learning in Action: A Guide to Conducting High-Impact School Visits[90]	This guide provides information and lists to prepare for and conduct a site visit. The document provides information on establishing a purpose, requesting program documents, and communicating insights, among other details.	
Multiple Measures[91]	Victoria Bernhardt's article, "Multiple Measures," is a seminal piece of literature on effective data use for school improvement. This document details the importance of using numerous types of data to analyze current school context and performance.	

Source: Multiple cited within the figure.

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[91] Bernhardt, "Multiple Measures," Op. cit.

ABOUT HANOVER RESEARCH

Hanover Research provides high-quality, custom research and analytics through a cost-effective model that helps clients make informed decisions, identify and seize opportunities, and heighten their effectiveness

OUR SOLUTIONS

ACADEMIC SOLUTIONS

- **College & Career Readiness:**
  Support on-time student graduation and prepare all students for post-secondary education and careers.

- **Program Evaluation:**
  Measure program impact to support informed, evidence-based investments in resources that maximize student outcomes and manage costs.

- **Safe & Supportive Environments:**
  Create an environment that supports the academic, cultural, and social-emotional needs of students, parents, and staff through a comprehensive annual assessment of climate and culture.

ADMINISTRATIVE SOLUTIONS

- **Family and Community Engagement:**
  Expand and strengthen family and community relationships and identify community partnerships that support student success.

- **Talent Recruitment, Retention & Development:**
  Attract and retain the best staff through an enhanced understanding of the teacher experience and staff professional development needs.

- **Operations Improvement:**
  Proactively address changes in demographics, enrollment levels, and community expectations in your budgeting decisions.

LEADERSHIP SOLUTION
Build a high-performing administration that is the first choice for students, parents, and staff.

OUR BENEFITS

EXPERT
200+ analysts with multiple methodology research expertise

FLEXIBLE
Ongoing custom research agenda adapts with organizations' needs

DEDICATED
Exclusive account and research teams ensure strategic partnership
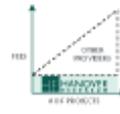
EFFICIENT
Annual, fixed-fee model shares costs and benefits