Establishing and Supporting a Culture of Effective Data Use in Your District

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Session Description

Data-driven approaches have become increasingly prominent methods used by education leaders to align and implement school improvement efforts. However, many leaders face challenges in building a culture of effective data use. Based on resources from the U.S. Department of Education and other sources, this session will offer solutions to common challenges. Topics will include: defining a culture of data use, the role of school and district leaders, identifying elements of effective data use, and using professional development to support local data culture efforts.
Survey of the Room

- Professional Position:
  - Location
    - State
    - District
    - School
    - Other
  - Position Type
    - Leadership
    - Management
    - Data/research
    - School support staff
    - Other

- Prior experience with or knowledge of subject:
  - Highly experienced/knowledgeable
  - Moderately experienced/knowledgeable
  - Minimally experienced/knowledgeable

- Session style preference:
  - More structure, less conversation
  - Less structure, more conversation
What are the most prominent challenges to effective data use facing your organization?
Necessary Conditions for Effective Data Use

Source: Ronka, Geier, andf Marciniak (2010).
<table>
<thead>
<tr>
<th>Conditions for Data Use</th>
<th>Guiding Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>What data do we have that can help us answer the questions we are currently asking about student learning? What improvements to our data quality would expand our ability to ask and answer these and other questions?</td>
</tr>
<tr>
<td>Capacity</td>
<td>What are the organizational structures and systems that enhance (or impede) our ability to use data effectively? Do all members of our school or district have the data they need to make effective decisions? Do all members of our school or district have the knowledge and skills necessary to make use of the data available to them?</td>
</tr>
<tr>
<td>Culture</td>
<td>Are we basing the decisions we need to make on data and evidence? Are we using data to communicate our decisions in ways that foster engagement by all stakeholders in improvement efforts?</td>
</tr>
</tbody>
</table>

Source: Ronka, Geier, and Marciniak (2010).
Establishing and Sustaining an Effective Data Culture
Definition of Culture of Data Use

A **strong data culture** results when an organization believes in continuous improvement and regularly puts that belief into practice. Schools and districts that have strong data cultures emphasize collaboration as a keystone for success and they empower teachers and administrators to make decisions for which they will be held accountable. Elements of a strong data culture include commitment, vision, beliefs, accountability, collaboration, modeling, and commitment to ongoing instructional and programmatic improvements.

Source: Ronka, Geier, and Marciniak (2010).
Elements of a Strong Data Culture

- **Commitment** from all stakeholder groups to make better use of data
- A clearly articulated **vision** for data use
- **Beliefs** about the efficacy of teaching and the value of data in improving teaching and learning
- **Accountability** for results coupled with empowering teachers to make instructional changes
- A culture of **collaboration** on all levels
- **Modeling of data** use by school and district leaders
- Commitment to making **ongoing instructional** and programmatic improvements

Source: Ronka, Geier, and Marciniak (2010).
Questions to Consider When Assessing Data Culture

• Is there a commitment by all key stakeholders to use data for continuous improvement?
• Are people held accountable for the use of data at the school and classroom level?
• Is collaboration among staff highly valued?
• Do school leaders model data-driven decision making as a key aspect of their roles and responsibilities?
• Do teachers believe that data can and should be used to inform instruction?
• Are teachers open to changing their instruction based on data about student learning?
Establishing a Culture of Data Use and Continuous Improvement

1. Create explicit expectation and norms throughout the school system
   - Create explicit expectations and norms by stating that data use is non-negotiable and by modeling appropriate behavior
   - At the school level, set and model these norms by showing the relevancy of data to systematically improving student achievement
   - Promote mutual accountability for data use among teachers, principals, and personnel in the central office, such that schools are held responsible for results, and the school system administrators are responsible for support and resources

Establishing a Culture of Data Use and Continuous Improvement

2. Create explicit norms and expectations at the school level

3. Foster mutual accountability in system-school relationships

Characteristics of a Data-Rich Culture

• Established vision and supporting goals for how data will be used to improve student achievement

• Standard approach and set of resources for collecting, reporting, and analyzing student data

• Consistent use of assessment data to inform and improve policies, interventions, and teaching approaches and to improve communication among teachers, students, and parents

• Continuously monitor and improve the process of collecting and analyzing data in order to enhance teaching methods and interventions

Source: Turning Data Into Action, Professional Development Toolkit - turningdataintoaction.org
Make Data Part of an Ongoing Cycle of Instructional Improvement

• Collect and prepare a variety of data about student learning
• Interpret data and develop hypotheses about how to improve student learning
• Modify instruction to test hypotheses and increase student learning
Establish a Clear Vision for Schoolwide Data Use

- Establish a schoolwide data team that sets the tone for ongoing data use
- Define critical teaching and learning concepts
- Develop a written plan that articulates activities, roles, and responsibilities
- Provide ongoing data leadership
Building Capacity for Effective Data Use
Data Capacity

• **Organizational factors** such as team structures, collaborative norms, and clearly defined roles and responsibilities that support data use

• **Technology** that can integrate data from multiple sources

• **Data accessibility** that allows multiple users to have access to data in formats that are easy to interpret

• **Data literacy** of assessment skills so data consumers know how to analyze multiple types of data and properly interpret results

Source: Ronka, Geier, and Marciniak (2010).
Data Capacity: Elements of a Strong Culture

- **Commitment** from all stakeholder groups to make better use of data
- A clearly articulated **vision** for data use
- **Beliefs** about the efficacy of teaching and the value of data in improving teaching and learning
- **Accountability** for results coupled with empowering teachers to make instructional changes
- A culture of **collaboration** at all levels
- **Modeling of data use** by school and district leaders
- Commitment to making **ongoing instructional and programmatic improvements**

Source: Ronka, Geier, and Marciniak (2010).
Data Capacity: Elements of a Strong Culture

Questions to consider when assessing the extent to which a culture of data use is present within a district or school include:

- Is there commitment by all key stakeholders to use data for continuous improvement?
- Are people held accountable for the use of data at the school and classroom level?
- Is collaboration among staff highly valued?
- Do school leaders model data-driven decision making as a key aspect of their roles and responsibilities?
- Do teachers believe that data can and should be used to inform instruction?
- Are teachers open to changing their instruction based on data about student learning?

Source: Ronka, Geier, and Marciniak (2010).
Building School Capacity for Data and Decision Making

• Key points for investing in professional development for data use:
  • Invest in professional development on data-informed instruction and provide ongoing training when necessary
  • Realize that teachers (and other users) will have different comfort levels with data and be prepared to support training at all levels
  • Provide time for within-school collaboration that is separate from faculty and administrative business meetings
  • Share data across schools to promote collaborative discussions and relationships
  • Consider rewards and incentives for data use, student achievement, and professional development

Building Staff Capacity: Characteristics of Effective PLCs and Data Teams

• Key roles and teams for building staff capacity:
  • Professional learning communities
  • Data teams
  • Data coaches

• Characteristics of effective PLCs and data teams:
  • Organized according to grade level and/or subject area
  • Meet on a regular basis and establish protocols for collegial action
  • Begin by focusing on data
  • Have a simple agenda and work to accomplish goals and action plans
  • End every meeting with a defined action plan

Source: Turning Data Into Action, Professional Development Toolkit - turningdataintoaction.org
Teaching Students to Examine Data

• Teachers should explain expectations and assessment criteria
• Teachers should provide feedback to students that is timely, specific, and constructive
• Teachers should provide time and data analysis tools that help students learn from feedback
• Teachers should use students’ data analyses to guide instructional changes

Source: Turning Data Into Action, Professional Development Toolkit - turningdataintoaction.org
Using the Data Analysis Process to Develop a Data-Rich Culture

• Collect data from a variety of sources.
• Use the data analysis process to inform instructional practices.
Teach Students to Examine Data and Set Learning Goals

• Explain expectations and assessment criteria
• Provide feedback to students that is timely, specific, well formatted, and constructive
• Provide tools that help students learn from feedback
• Use students’ data to guide instructional changes
Provide Supports that Foster a Data-Driven Culture Within the School

• Designate a school-based facilitator who meets and collaborates with teacher teams in discussing data and solving problems
• Dedicate structured time for staff collaboration
• Provide targeted professional development regularly
Ensuring Quality Data
Data Quality: What is a Culture of Quality Data?

A culture of quality data is the belief that good data are an integral part of teaching, learning, and managing the school enterprise. Everyone who has a role in student outcomes – teachers, administrators, counselors, office support staff, school board members, and others – shares this belief. Because good data are as much a resource as staff, books, and computers, a wise education system is willing to invest time and money in achieving useful information and respects the effort taken to produce it.
Data Quality: Components of Quality Data

- **Accuracy** – The information must be correct and complete; data entry procedures must be reliable to ensure that a report will have the same information regardless of who fills it out.

- **Security** – The confidentiality of student and staff records must be ensured, and data must be secure.

- **Utility** – The data have to provide the right information to answer the question that is asked.

- **Timeliness** – Deadlines are discussed and data are entered in a timely manner.

Data Quality: Ensuring Quality

- Use **multiple measures** to ensure relevance and the ability to triangulate from more than one data set.
- Make sure data are **well organized** and presented in **data displays** that are easy to interpret.
- Use **accurate data** that have been standardized and cleansed.
- Make data available to stakeholder groups **before the shelf life has expired**.
- **Disaggregate** data for analyzing across multiple factors.

Source: Ronka, Geier, and Marciniak (2010).
Data Quality: The Role of the Principal

• Things to Think About
  • How do you and your staff use data to measure student achievement?
  • When you place your signature on a report, how certain are you that the data are correct?
  • What data are collected in your school?
  • What can you and your staff do to produce quality data?

• Things to Do
  • Check reports for accuracy and reasonableness before “signing off” and sending to the district.
  • With staff, periodically spot-check source documents against data entered to ensure that required data (e.g., medical information) are actually being entered.
  • Ensure that your staff have access to appropriate technology tools.
  • Stay current by attending meetings and training about data requirements.
  • Provide district data personnel with recommendations for improvements in data collection procedures.
  • Allow and encourage staff to attend training in their areas of expertise.
  • Consider using a variety of training strategies, including the “train-the-trainer” model, where necessary.
  • Work with your staff and the district to develop and use standard procedures for data entry and reporting.
  • Provide trained staff to back up data entry personnel during peak periods (enrollment, scheduling, etc.).
  • Understand and communicate laws and regulations that affect data at your school.
  • Support and monitor district data security policies and procedures.
  • Encourage the use of data to make daily instructional decisions.
  • Provide an environment conducive to accurate data entry.
  • Develop a calendar for data reporting deadlines.

Data Quality: The Role of the Teacher

**Things to Think About**
- Who uses the data that you enter (e.g., parents, students, school board members, the principal, other teachers, payroll staff, the news media)?
- How do you use data to make important individual and group instructional decisions (e.g., progress toward content standards, need for remediation/intervention)?
- What is the effect of the data you enter on students’ educational experiences?
- What is the impact of incomplete or inaccurate data?
- What can you do to increase the accuracy of data?

**Things to Do**
- Ask for and attend training on the use of data in the instructional program.
- Ask for appropriate instructions and documentation.
- Do not be afraid to ask questions about your data responsibilities.
- Identify barriers to effective data entry and communicate these to the principal or other appropriate personnel.
- Respect the privacy and confidentiality of student data by protecting data from students and unauthorized personnel.
- Follow your district data security policies and procedures (e.g., change passwords frequently, do not share passwords with colleagues or students, etc.).
- Enter data accurately and in a timely manner.
- Check your work for accuracy and completeness.
- Ask for help if you make an error.
- Share good ideas and best practices about data entry with your peers.
- Check your calendar for data reporting deadlines so that you can allocate time for data entry.
Data Quality: The Role of the Superintendent

• **Things to Think About**
  - How does your district use data to demonstrate achievement in educational programs?
  - How do you know that the data you review are accurate?
  - What data are schools responsible for entering into computer systems?
  - Is there an inventory of data collected in your district?
  - Do personnel in your district understand the use of data in the instructional program?
  - Do personnel in your district understand the use of data in funding programs?
  - How do you deal with redundant requests for data?
  - Are personnel available to enter data into computer systems at schools?
  - Are staff responsible for data entry receiving appropriate professional development?
  - Is there a process in place to resolve discrepancies in information?

• **Things to Do**
  - Set education benchmarks that use data to measure student achievement.
  - Support the development of a Culture of Quality Data in your district through an effective professional development program.
  - Encourage principals to make data-driven, building-level decisions.
  - Support your information technology director in the promotion of more efficient data collection procedures, the use of technology to decrease data entry errors, and the movement toward applications that are “interoperable” (i.e., that interact with each other using a minimum amount of programming resources).
  - Support the allocation of funding to provide schools with the appropriate resources to enter data.
  - Assign a member of your staff to be a data “steward” or coordinator.
Data Quality: The Role of the Data Stewards and Managers

- **Things to Think About**
  - Does the information reviewed by your superintendent and senior staff represent facts based on accurate data from programs and offices?
  - Does everyone in your school district understand how data are used to benefit the instructional program and provide funds for services?
  - Are data collected systematically in the school district?
  - Are the staff responsible for entering data trained to do an effective job?
  - Is there a process in place that allows “end-users” to request or modify reports?
  - Are you and the information technology (IT) director operating collaboratively?

- **Things to Do**
  - Provide professional development for staff members leading toward a culture of quality data in the school. The sessions might include:
    - demonstrations that incorporate hands-on training, enabling data entry personnel to become used to the actual data entry screens;
    - examples that actually reflect situations that will be encountered;
    - handbooks or guidebooks, with copies of data entry screens, systematic instructions, and the rationale for entering the data;
    - descriptions of the procedures for obtaining assistance (e.g., help desk phone number, online and/or e-mail query process); and
    - copies of the reports created from the data, enabling trainees who enter information to have a sense of how their work affects the operation of the school.
  - Resolve discrepancies in information before reports are forwarded to senior staff.

Data Quality: The Role of Office Staff

• Things to Think About
  • Who uses the data that you enter (e.g., school board members, the principal, parents, teachers, students, payroll staff, the news media)?
  • How are data used to make important instructional decisions (e.g., student placement)?
  • What is the effect of the data you enter on schools or programs?
  • What can you do to ensure the accuracy of the data you enter?

• Things to Do
  • Enter data accurately and in a timely manner.
  • Ask for and attend professional development programs.
  • Ask for appropriate instructions and documentation.
  • Do not be afraid to ask questions about your responsibilities.
  • Identify barriers to effective data entry procedures and communicate these to the principal or other appropriate personnel.
  • Implement the district data security policies and procedures (e.g., change passwords frequently, do not share passwords, treat data confidentially, etc.).
  • Check your work and run appropriate edit reports.
  • Ask for help when you make an error.
  • Identify a peer who does work similar to yours so that you can share ideas and best practices.
  • Check your calendar for data reporting deadlines so that you can set aside time for data entry.
Frameworks and Resources
Frameworks and Resources

• Strategic Data Project ([http://sdp.cepr.harvard.edu/](http://sdp.cepr.harvard.edu/))
  • Strategic Use of Data Rubric
  • Toolkit for Effective Data Use

• Data Wise Project ([www.gse.harvard.edu/data-wise-project](http://www.gse.harvard.edu/data-wise-project))
  • Data Wise Improvement Process
  • ACE Habits of Mind

• Turning Data Into Action ([www.turningdataintoaction.org](http://www.turningdataintoaction.org))
  • Professional Development Toolkit

• Data Quality Campaign ([www.dataqualitycampaign.org](http://www.dataqualitycampaign.org))

• REL Northeast and Islands ([http://www.relnei.org/](http://www.relnei.org/))
  • Toolkit for a Workshop on Building a Culture of Data Use
Harvard’s Strategic Data Project: Strategic Use of Data Rubric

- Programs and Major Initiatives
- Performance Management
- Resource Allocation and Budgeting

<table>
<thead>
<tr>
<th>Programs and Major Initiatives</th>
<th>BASIC</th>
<th>EMERGING</th>
<th>STRONG</th>
<th>EXEMPLARY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organizational Strategy</strong></td>
<td>No strategic plan; or if strategic plan exists, fails to inform major initiatives.</td>
<td>Strategic plan informs some major initiatives.</td>
<td>Strategic plan informs most major initiatives.</td>
<td>Strategic plan informs all major initiatives.</td>
</tr>
<tr>
<td>To what extent does the organization use a strategic plan to organize program and initiative priorities?</td>
<td>Major initiatives/programs frequently generated, crisis-driven and uncoordinated with strategy.</td>
<td>Major initiatives superficially aligned with strategy.</td>
<td>Major initiatives significantly aligned with strategy.</td>
<td>Major initiatives tightly aligned with strategy; alignment understood well by agency.</td>
</tr>
<tr>
<td>Limited understanding of current initiatives. No complete list of initiatives in one place.</td>
<td>Some understanding of current efforts.</td>
<td>Significant understanding of current efforts.</td>
<td>Deep understanding of current efforts. New projects not authorized without assessing current initiatives.</td>
<td></td>
</tr>
<tr>
<td>No effort to avoid duplication across programs. No effort to eliminate or rationalize old initiatives.</td>
<td>Some effort to avoid duplication across programs.</td>
<td>Efforts exist to coordinate programs and avoid duplication</td>
<td>Limited number of major initiatives. No duplication across programs.</td>
<td></td>
</tr>
</tbody>
</table>
Harvard’s Strategic Data Project: Toolkit for Effective Data Use

The toolkit consists of five components, each mapped against a stage in the data collection and analysis process:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify essential data elements for analysing student achievement.</td>
<td>SDP Data Specification Guide: Successful data analysis begins with proper identification of data elements necessary to answer key questions of interest.</td>
</tr>
<tr>
<td>Clean, check, and build variables for your data set.</td>
<td>SDP Data Building Tasks: Upon collecting essential data elements you must ensure that the data can be reliably used in future analyses.</td>
</tr>
<tr>
<td>Connect relevant data sets from different sources.</td>
<td>SDP Linking Guide: Now that you’ve collected data and cleaned your data, you must merge the files together to create an analysis file.</td>
</tr>
<tr>
<td>Analyze your data sets.</td>
<td>SDP Analysis Guide: The final step in the SDP Toolkit for Effective Data Use is to analyze the data you’ve identified, cleaned, and connected.</td>
</tr>
<tr>
<td>Adopt best practices to facilitate shared and replicable data analysis.</td>
<td>SDP Coding Style Guide: To ensure that statistical code is easily shared across a team and is replicable by future users, SDP and CEPR recommend that you follow best coding, programming, and data management practices.</td>
</tr>
</tbody>
</table>
Data Wise Project: The Data Wise Improvement Process

1. Organizing for Collaborative Work
2. Building Assessment Literacy
3. Creating a Data Overview
4. Digging into Student Data
5. Examining Instruction
6. Developing an Action Plan
7. Planning to Assess Progress
8. Acting and Assessing

The Data Wise District: The Supporting Role of Administrators

1. Set Up a Data System - Whether the district creates its own system or purchases a software program, administrators must consider:
   - What data to include
   - How to organize it and update it regularly
   - How to balance access and confidentiality

2. Create Incentives - One incentive is to require that school improvement plans be based on student assessment results. If schools with strong improvement plans and proven results are granted more autonomy, this can motivate school teams to do the analysis work well.

The Data Wise District: The Supporting Role of Administrators

3. Support New Skills - School staffs will need professional development to support a variety of skills:
   - How to interpret and use assessment data
   - How to access data and create graphic displays
   - How to participate productively in group discussions
   - How to develop, implement, and assess action plans

4. Find the Time - Teachers need time to work together in order to learn and implement these new skills. Options can include:
   - Scheduling a weekly early release day
   - Paying substitutes to cover classes
   - Compensating teachers for extra time

The Data Wise District: The Supporting Role of Administrators

5. Model the Work - District leaders can also model the “Data Wise” Improvement Process. This may be new and challenging work for most members of the central office team, but it sends a strong message to the district’s schools.
Turning Data Into Action: Professional Development Toolkit

1. Building a culture for the effective use of educational data
2. Establishing professional learning communities
3. Evidence-based practices supporting the use of educational data
4. Analyzing data
5. Technologies enabling the use of educational data
Turning Data Into Action: Professional Development Toolkit

Section 1: Building a Culture for the Effective Use of Educational Data

Step 1: Establish the need for a data-driven culture and set the vision.

Step 4: Continuously monitor progress and improve

Review professional development sections and relevant resources.

Section 2: Establishing Professional Learning Communities

Step 2: Implement processes and structures for what data to use and how to use it.

Step 3: Implement tools and systems to support vision and processes.

Section 3: Evidence-Based Practices Supporting the Use of Educational Data

Section 4: Analyzing Data

Section 5: Technologies Enabling the Use of Educational Data

Source: Turning Data Into Action, Professional Development Toolkit - turningdataintoaction.org
Culture of Data Use Framework

1. Ensuring access to data
2. Making meaning from data
3. Clarifying expectations for data use
4. Building knowledge and skills to use data
5. Leading a culture of data use

Culture of Data Use Framework: 1. Ensuring Access to Data

1.0 Initial Reflection

Data are accessed, coordinated, filtered, and prepared in ways that allow educators to quickly and efficiently analyze and interpret data to answer key questions and address important teaching and learning issues.

Culture of Data Use Framework: 1. Ensuring Access to Data

1.1 Findings from Research

- Districts work in cooperation with schools to develop data systems that ensure appropriate data for classroom, school, and district use
- Districts and schools coordinate how to centralize and streamline data reporting
- Districts and schools work together to clarify when data analysis needs are changing and to revise systems to accommodate emerging needs
- Both the central office and schools may have a role to ensure that data reports meet the needs of teachers and can address the questions of teacher teams

Culture of Data Use Framework: 1. Ensuring Access to Data

1.2 Effective data-use practices

- Identify and invest in data management or warehouse systems
- Select appropriate data for classroom, school, and district use
- Limit the number of research-based programs schools can consider
- Provide data reports tailored to school specific requests
- Establish structures to encourage a strong bottom-up information flow from the school to the central office
- Prepare data reports for school review
- Identify staffing or personnel to support data functions that can be used or shared across schools

Culture of Data Use Framework: 1. Ensuring Access to Data

1.3 Barriers to a culture of data use

- Data management systems are cumbersome, inefficient, and frustrating for teachers to use
- Technical limitations of data systems suppress data use
- Educators go to great lengths to compensate for a lack of integration with data systems and might even have built their own systems to address the lack of a district system
- Teacher leaders take on the task of coordinating and preparing data for teacher team meetings, usually during their own time
- Educators can become frustrated with the amount of time it takes to access and analyze data, most frequently because of a lack of system integration

Culture of Data Use Framework: 1. Ensuring Access to Data

1.4 Policies and guidance to support a culture of data use

- Written expectations for data use that show which practices align with improved practice and document the shift away from an accountability-based data-use approach
- Written clarification identifying which users of data are meant to answer which questions
- Calendars and timelines of district data-use expectations by grade
- Description of district data systems to clarify functions and uses
- Description of district data systems that describe how they support and align with the everyday work of educators

Culture of Data Use Framework: 2. Making Meaning from Data

2.0 Initial reflection

Protected time is provided to allow users of data to collectively make sense of what the data indicate and explore how to move data to evidence that will inform instruction. This time is focused on making meaning from data and is supported by the use of consistent inquiry-based practices.

Culture of Data Use Framework: 2. Making Meaning from Data

2.1 Findings from research

• District and school staff work together to ensure that teachers have adequate structures and supports to review data

• Educators are supported in participating in collaborative inquiry in order to make sense of data and apply findings to instruction and improvement

• Educators from multiple levels of the education system work together to collectively understand how to use evidence from data analysis in decision making

• District and school leaders work together to ensure that teachers apply new knowledge to improve classroom instruction or school-level practices

Culture of Data Use Framework: 2. Making Meaning from Data

2.2 Effective data-use practices

- Assist schools in finding ways to secure time for data analysis at the school level
- Facilitate building-level discussions of progress over time
- Support the idea that in most data-analysis practices, educators are juggling multiple forms of evidence at one
- Support the development of data team, as they are shown to help make data accessible for teacher use
- Engage school staff to set performance goals and benchmarks that establish agreed upon learning outcomes and create assessments aligned to those outcomes
- Create consistent tools and processes (protocols) for data review

Culture of Data Use Framework: 2. Making Meaning from Data

2.3 Barriers to a culture of data use

- Data are used, but there is little evidence of collegiality
- Protocols for data use are followed but only at the most procedural and basic level; team dialogue does not focus on instructional change
- Structures and protocols for collaboration are not used or understood
- Teachers who believe in data-use practices do it on their own time – before school, after school, or at lunch
- Ineffective access to data prevents collaboration and dialogue about instructional practices

Culture of Data Use Framework: 2. Making Meaning from Data

2.4 Policies and guidance to support a culture of data use

- A school calendar documenting scheduled time to analyze evidence
- Written role expectations for data teams with specific team-member functions outlined
- A schedule with opportunities for calibration
- Agreed upon norms for data use posted and reviewed at all meetings
- Written documentation of how coaches or instructional specialists will support collaborative data-use practices

Culture of Data Use Framework: 3. Clarifying Expectations for Data Use

3.0 Initial reflection

There are clear expectations about how to use data, and these expectation change over time as skills for data use grow. District, school, and teacher leaders frame consistent messages about how data can be used to support teachers’ professional capacity and student learning.
Culture of Data Use Framework: 3. Clarifying Expectations for Data Use

3.1 Findings from research

- Districts and schools establish and communicate a common interpretation and orientation toward data-driven decision making
- The district and schools provide clear messages about how data use supports improvements in student learning
- District data-use expectations are mediated at the school level by formal and informal school leaders, so that establishing professional expectations shifts over time, as the disposition and skills to use data grow
- District and school leaders clarify when data needs are changing

Culture of Data Use Framework: 3. Clarifying Expectations for Data Use

3.2 Effective data-use practices

- Recognize teachers’ wealth of tacit knowledge as the starting point for data review
- Model professional norms of behavior, including effective dialogue skills and use of the inquiry cycle
- Use evidence of improvement to provide feedback to system leaders
- Set the tone for accountability among staff members to ensure data review meetings are purposeful and lead to improved practice
- Write a clear data-use policy that outlines expectations for data use with students, teachers, parents, principals, and district office staff and that addresses challenges to effective data use
- Support consistent messaging to the community and parents about how the district engages with evidence of student learning at different levels of the system
- Ensure safety and security of student information and evidence
Culture of Data Use Framework: 3. Clarifying Expectations for Data Use

3.3 Barriers to a culture of data use

- Data mistrusted and even are seen as a compliance tool rather than an instructional support
- Teachers have competing time demands for data use and analysis
- Formal district policies around data use do not exist
- Educators appear to be negative about data use, but deeper questioning reveals that it is not the idea of data use in itself that concerns educators. Rather, it is the perceived difficulties that arise with data use – the amount of time required, the lack of access to data, and so on – that prompt the negative responses
- Different data-use expectation are in play across district and schools

Culture of Data Use Framework: 3. Clarifying Expectations for Data Use

3.4 Policies and guidance to support a culture of data use

- Written guidance about the focus of data use as design to support all students
- Written communication highlighting how the focus on all students will raise the achievement of struggling learners through increased differentiated and personalized student supports
- Written expectations about annual “products” that include student evidence; including written guidance for use of evidence at parent-teacher meetings, portfolios, and information that is documented across years

Culture of Data Use Framework: 4. Building Knowledge and Skills to Use Data

4.0 Initial reflection

Adequate professional learning takes place regarding data use, assessment literacy, and using data to inform instruction. Professional learning is integrated into daily practices and supports teachers in building content knowledge over time. Professional learning is differentiated to support teachers’ specific learning needs.
Culture of Data Use Framework: 4. Building Knowledge and Skills to Use Data

4.1 Findings from research

• Districts and schools provide opportunities for professional learning that builds educators’ capacities to identify data, interpret data, make meaning from evidence, and use evidence to inform instruction

• Professional development should combine information about data literacy and assessment literacy with content expertise to build knowledge of how to apply data findings

• Learning opportunities include expanding teachers’ repertoire of instructional strategies to ensure that teachers can more effectively transition from analysis to classroom practices that are informed by data

Culture of Data Use Framework: 4. Building Knowledge and Skills to Use Data

4.2 Effective data-use practices

- Ensure that districts provide funding, expertise, and training for varied data-use practices across the district.
- Ensure that districts provide professional learning for principals to use data at the building level and with teachers and teacher teams.
- Encourage professional learning that focuses on building leadership and schoolwide expertise on using data to inform instruction.
- Provide ongoing learning to a cadre of teacher leaders who can lead data teams in grade-level and departmental configurations.
- As teachers become proficient with analysis, professional learning shifts to supporting an expanded repertoire of instructional strategies to address data findings.
- When training for new data systems, focus on the data; how it can be accessed, and what the system will do to support teachers and teams.
Culture of Data Use Framework: 4. Building Knowledge and Skills to Use Data

4.3 Barriers to a culture of data use

- Professional development occurs in large group settings and does not address skill development using teachers’ own data.
- Professional development takes place in the early stages of data use, but as teachers shift to more challenging practices, professional learning is no longer focused on data.
- Evidence about teachers’ current practices and learning needs is not collected, and professional learning is not aligned to teacher learning needs.
- Different messages from competing professional development providers hinder coherence and application of new practices.

Culture of Data Use Framework: 4. Building Knowledge and Skills to Use Data

4.4 Policies and guidance to support a culture of data use

- An annual schedule of professional learning for data use, including formal, informal, large-scale, team-based, and daily learning, focused on common learning goals schoolwide and including individual (or team) areas of focus for teacher learning
- Written structure to document teacher learning goals regarding data use
- Protocol for principals to review teachers’ practices with various types of data use (including both schoolwide and classroom uses) and to outline next steps in their individual learning

Culture of Data Use Framework: 5. Provide Leadership to Nurture a Culture of Data Use

5.0 Initial Reflection

Leadership nurtures and supports a culture of data use and develops organizational structures that include time and resources to conduct ongoing data dialogue and feedback that will support users to act on new knowledge. Acting on knowledge is supported at the administrative, teacher, and student levels. Leaders’ use of data is central to helping educators interact around issues that will lead to improved learning outcomes.

Culture of Data Use Framework: 5. Provide Leadership to Nurture a Culture of Data Use

5.1 Findings from research

- The principle recognizes and models how data use informs instruction and fosters shared mental models of how data use can improve teaching and learning
- Principals and superintendents ensure access to resources that establish a data culture, such as setting aside time for data practices, ensuring a safe environment for teachers to engage in dialogue about best practices, and modeling effective data-use practices
- The role of the central office includes ensuring that the principals’ data responsibilities are clearly defined and manageable

Culture of Data Use Framework: 5. Provide Leadership to Nurture a Culture of Data Use

5.2 Effective data-use practices

- Ensure that leaders champion data analysis practices
- Have districts address principal leadership in a structured way to build knowledge of data use and of how to lead data use in schools
- Provide opportunities for “tuning” practices to build consistency and coherence across districts and schools
- Ensure that the central office requires principals to use data and holds them accountable for doing so over time
- Have the central office create and lead opportunities for principals to come together to share data-use practices at their building level and to analyze their data together
- Have principals intentionally employ strategies to support data use to improve student learning in order to see teachers report better attitudes and more effective data use

Culture of Data Use Framework: 5. Provide Leadership to Nurture a Culture of Data Use

5.3 Barriers to a culture of data use

- Time is not provided for collaborative review of data, or the time that is available is barely monitored for effective practices.
- The culture is one in which teachers do not feel safe revealing where they need to improve practice, and leaders punish teachers for sharing areas of weakness or concern.
- Decisions at the district or school level are made “from the gut” and do not model effective data-use practices.

Culture of Data Use Framework: 5. Provide Leadership to Nurture a Culture of Data Use

5.4 Policies and guidance to support a culture of data use

- Job descriptions that capture the role of data-use leaders throughout the district: principals, teacher leaders, data team leaders, district leaders
- A hiring protocol outline expectations or activities that sow facility with data use
- Documentation related to how leaders learn data use over time, with increased expectations outlined over time
# Culture of Data Use Framework: Determining Assessment Types and Roles for Data Analysis

<table>
<thead>
<tr>
<th>Assessment type(s)</th>
<th>Assessment tools</th>
<th>Expectations for users of data</th>
<th>Focus for professional learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily: Classroom formative</td>
<td>Questioning, White boards, Exit tickets, Observational records</td>
<td>Teachers: Monitor student understanding of learning goals and revise instruction based on data</td>
<td>Use data to set learning goals with students</td>
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<td></td>
<td></td>
<td>Students: Self-monitor progress toward learning goals and make adjustments as needed</td>
<td>Use data “on the fly” to change instruction</td>
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<tr>
<td></td>
<td></td>
<td>School/district:</td>
<td>Develop flexible groups</td>
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<tr>
<td>Periodic: Diagnostic assessments and progress monitoring tools</td>
<td>Dynamic Indicators of Basic Early Literacy Skills, Developmental Reading Assessment Aimsweb (math)</td>
<td>Teachers: Place students into intervention groups, using the district response to intervention mode</td>
<td>Diagnose individual knowledge and skills</td>
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<tr>
<td></td>
<td></td>
<td>Students: Self-monitor progress toward learning goals</td>
<td>Group students for instruction</td>
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<tr>
<td></td>
<td></td>
<td>School/district: Provide early identification of students who require targeted interventions</td>
<td>Establish intervention groups</td>
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<td>Identify next steps for learning</td>
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<tr>
<td>Weekly or biweekly: “Common” assessments designed by grade level and aligned to standards and calendar</td>
<td>Weekly assessments developed by teacher teams, Evidence reviewed in grade-level data teams to guide instruction</td>
<td>Teachers: Check individual and class progress against learning goals</td>
<td>Identify patterns in proficiency</td>
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<tr>
<td></td>
<td></td>
<td>Students: Check progress toward learning goals</td>
<td>Placement considerations</td>
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<tr>
<td></td>
<td></td>
<td>School/district: Guide dialogue about next steps in instruction</td>
<td>Guide re-teach and enrich groups</td>
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<tr>
<td>Periodic: Unit testing: high school competency assessments</td>
<td>End of unit tests, High school competency assessments</td>
<td>Teachers: Determine grades and promotion</td>
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<td>Students: Gauge progress toward meeting standards and share with parents at conferences</td>
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<td>School/district: Conduct department and grade-level team analysis of mastery</td>
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<td>Clarify grading and reporting for formative versus summative assessments</td>
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## Culture of Data Use Framework: Determining Assessment Types and Roles for Data Analysis

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</tr>
</thead>
<tbody>
<tr>
<td><strong>Quarterly; Benchmark assessments</strong></td>
<td>Fountas and Pinnel Benchmark Assessment</td>
<td>Analyze which students need additional interventions or targeted services and which can benefit from advanced work</td>
<td>Identify area of student growth</td>
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<tr>
<td></td>
<td>District benchmark assessments in math, science, and social studies</td>
<td>Analyze learning trends for individual and groups of students compared to national norms</td>
<td>Use effective instructional strategies</td>
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<tr>
<td></td>
<td>Northwest Evaluation Association assessments</td>
<td></td>
<td>Identify patterns in proficiency</td>
</tr>
<tr>
<td></td>
<td>(grades 6–12)</td>
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<td>Placement considerations</td>
</tr>
<tr>
<td><strong>Annual: State assessment</strong></td>
<td>New England Common Assessment Program</td>
<td>Analyze curricular focus areas for improvement</td>
<td>Train leadership to use common protocols at the school to support effective use of state assessment evidence, including patterns of student achievement, instructional programs, additional knowledge, skills, or resources for staff</td>
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<td>Align curriculum to state standards</td>
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<tr>
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<td>Identify broad areas of strengths and weakness in the curriculum, determine degree of progress, and in which areas students are not meeting standards</td>
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References

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