



MODULE 1: GETTING READY

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MODULE 1: GETTING READY



Tools and Resources for Getting Ready



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WHERE ARE WE NOW?

The District Data Team Toolkit is based on the Data-Driven Inquiry and Action Cycle. The Cycle provides the structure that takes data use within the district from asking the right questions to getting results. It is an iterative process in which the district acts on data to support continuous learning and improvement. The Toolkit uses the steps of the Cycle to structure a progression through the model—you are now in **Module 1: Getting Ready**.



This module introduces district leaders to the purpose and role of a District Data Team in building a district-wide culture of data use. It provides guidance on how to establish a District Data Team and address some of the functions that will help the Team organize for success. By addressing these basic functions, the Team will then be able to engage in a meaningful data-driven inquiry process (outlined in modules 2–6).

MODULE OBJECTIVES

The **Getting Ready** module will help a district:

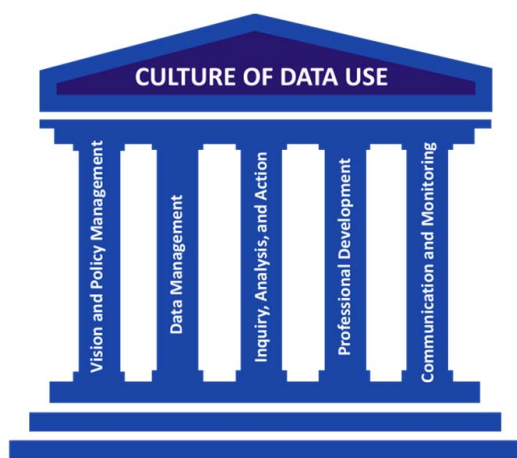
- ▶ Set the vision for data use across the district
- ▶ Build a culture of inquiry to promote systemic data use
- ▶ Establish a District Data Team to drive this work
- ▶ Build data literacy
- ▶ Understand types of data that inform inquiry
- ▶ Establish systems and policies to inventory, collect, and disseminate data
- ▶ Manage the change process



WHAT IS A DISTRICT DATA TEAM?

A data team can generally be defined as a group of educators collaboratively using data to identify and understand opportunities for improvement, then working together to make changes that get measurable results. Using protocols for collaborative inquiry, the group follows a process in which members prepare, implement, and reflect on data-informed actionable goals.

This simple definition can be applied broadly at many levels within a district. At the classroom level, teachers use data to identify student learning problems and work together to plan instructional changes that will yield improvements in learning. At the school level, principals and school improvement teams use data to identify goals to drive improvements in the ways teachers collaborate and learn, thereby improving results for all students. Within a district office, many departments and leaders use data to make decisions regarding the management and efficiency of their particular responsibilities.



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However, a District Data Team is one that has a unique position from all of the others. By definition, district leaders have unique perspectives on the operations of the district and correspondingly distinct responsibilities to make decisions that will have maximum benefit for the entire system. For these reasons, it is wise to establish a District Data Team that intentionally and strategically analyzes data from a wide variety of sources, triangulating and cross-referencing evidence as much as possible to gain new insight on the work taking place in service of teaching and learning. The Team can then use this new knowledge to make informed decisions, while also setting the course for inquiry and data use by all other teams in the district.

In addition to conducting its own inquiries, a District Data Team is responsible for establishing the supports necessary for everyone throughout the district to create and sustain a culture of inquiry and data use. To do this, a District Data Team fulfills five essential functions.

Five Key Functions of a District Data Team

| | |
|--------------------------------------|---|
| Vision and Policy Management | Creating and articulating the vision, setting and modeling expectations, and implementing and upholding policies for data use in the district. |
| Data Management | Identifying data to be collected, managing data infrastructure and access, and designing meaningful data displays. |
| Inquiry, Analysis, and Action | Developing focusing questions and analyzing data to make district-wide decisions about curriculum, staffing, resources, and professional development. |
| Professional Development | Providing training and professional development to support district departments, principals, school data teams, and teachers to use data. |
| Communication and Monitoring | Communicating district-level focusing questions and findings throughout the district. Monitoring the school-level use of data, as well as goals and action plans to identify trends and patterns. |

These functions are interconnected. In order to build a vibrant culture of inquiry and data use, a district must ensure that all functions are addressed. For example, an effort to establish high quality common planning time can be hampered by a lack of access to periodic assessment data. Conversely, the rollout of a data warehouse or other method for reporting data within a district can fall flat if the end users are not trained on how to access the information. However, it is better for a district to focus on building capacity in one area and do that well, rather than attempting to launch work in all five realms at once. Part of the work of a District Data Team is to determine the needs of the district and which function(s) should be the immediate priorities for the Team to address.

The majority of the guidance in this Toolkit focuses on supporting a District Data Team with Inquiry, Analysis, and Action and Communication and Monitoring. Some aspects of the Toolkit provide initial support for Vision and Policy Management and Data Management.

Activity 1.1 Functions of a District Data Team

This activity will help a district begin thinking about the role(s) the District Data Team will fill and who should serve on the Team.

(1.1.1T: Functions of a District Data Team)





WHAT IS A CULTURE OF INQUIRY?

Developing a culture that uses data to make decisions is a difficult task. Simply providing data is not enough. Mandating meetings to analyze benchmark test results rarely causes the improvements we hoped to get by implementing the assessment in the first place.

To make the most of the data available within a district, there must be something more. In highly successful data use initiatives, there is a cultural shift that causes people to want to work differently, where teams of educators will meet regularly to analyze data, ask questions, and dig deeply to understand and fix problems. In all cases, there is a process that drives this kind of work and collaboration.

In highly successful data use initiatives, there is a cultural shift that causes people to want to work differently.

Having a culture of inquiry means having people within a district who are regularly asking questions about what all students should know and be able to do, how best to teach content and skills, and what student demonstrations will be acceptable ways to measure learning. The leadership that a District Data Team can provide is central to creating this district-wide culture of inquiry.

The modules in this Toolkit will help a district establish or enhance its District Data Team, as well as build the foundations to create a culture of inquiry and data use. One key to creating this culture is to understand what might be getting in the way of the district developing a thriving culture of inquiry and data use. Debra Ingram (2004)¹ and others uncovered seven barriers to the use of data to improve practice:

Cultural Barriers:

1. Many teachers have developed their own personal metric for judging the effectiveness of their teaching, and often this metric differs from the metrics of external parties, e.g., state accountability systems and school boards.
2. Many teachers and administrators base their decisions on experience, intuition, and anecdotal information (professional judgment), rather than on information that is collected systematically.

3. There is little agreement among stakeholders about which student outcomes are most important and what kinds of data are meaningful.

Technical Barriers:

4. Some teachers disassociate their own performance and that of students, which leads them to overlook useful data.
5. Data that teachers want about “really important outcomes” are rarely available and usually hard to measure.
6. Schools rarely provide the time needed to collect and analyze data.

Political Barriers:

7. Data have often been used politically, leading to mistrust of data and data avoidance.

Understanding which of these barriers is most salient in the district can help the Team strategize on the best way to engage more stakeholders. However, the Team must also consider whether these are actual barriers, or symptoms of something else. The section on *Managing the Change Process* provides additional guidance for engaging stakeholders in an initiative to increase use of inquiry and data in the system.

Activity 1.2 Barriers to Effective Data Use

Use this activity to begin thinking about the challenges the Team will address to improve data use in the district.

(1.2.1T: Barriers to Effective Data Use)



A VISION FOR DATA USE

In order for a district to shift from being an efficient generator and collector of data to an organization that translates data into information to guide improvement, a broad effort and a clear, shared vision are required. A shared vision sets a common goal and direction for the work of all involved. A vision that specifically addresses data use in the district can serve to connect the various functions that a District Data Team fills, as well as connect the Team to other district efforts, so they don't stand as silos, but rather work together as pillars to sustain a culture of inquiry and data use. Without a clear vision for inquiry and data use that is broadly understood throughout the district, the related supports and tools may still be viewed as disconnected from other district initiatives, and from important work at the school and classroom levels.

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A vision statement is one that takes into account the mission of the district and describes how things will look in the future if the Team's work is successful. Hallmarks of a clear and vibrant vision² include:

- The vision is reflected in the district's strategy and corresponding use of resources
- Everyone in the system gives the same responses to important questions, like “why is data use important to teaching and learning?”
- Stakeholders demonstrate shared belief, collective clarity, ownership, and energy for the work at hand
- People are inspired to look beyond quick fixes and dig into real challenges
- People are able to look beyond smaller challenges and focus on what is really important

The district likely has a mission statement that answers the question, “Why do we exist?” and serves as a clear statement of purpose for everyone in the district. At its core, the statement puts a stake in the ground and declares why you exist—to educate children.

A district vision statement for data use should derive from the district's overarching mission and vision. It will have a slightly different tone that focuses on data use, while still connecting in some way to improving performance, taking action, or doing things differently than they have been done in the past. The vision statement should define the future so it can serve as a guidepost for all data use efforts.

If there are people anywhere in the district who aren't sure of what data are available, what actions data should inform, or why certain data are even collected, this may be a sign that the district lacks a clear and shared vision for data use. Consider for a moment the data use in your own district.

- How prepared are principals to use inquiry and data to inform their own work?
- How prepared are principals to lead their staff and teachers in inquiry and data use? To what extent do they actually do this?
- How prepared are staff and teachers to use inquiry and data to inform their work? To what extent are they actually engaged in data use?
- To what extent can principals, teachers, and others in the district articulate how data inform their practice and further the district's mission for educating its students?

Activity 1.3 Vision for Data Use

Open the *Vision for Data Use* document and complete the activities to either assess the district's existing vision for data use, or craft a new one.

(1.3.1T: Vision for Data Use)





DATA TEAM COMPOSITION

In conducting the work to this point, several people have probably contributed who will serve as members of the District Data Team in a sustained capacity. Now that the functions of the Team are understood and there is a strong vision for data use across the district, it is time to formalize the Team into a functioning entity.

Using the results of 1.1.1T: *Functions of a District Data Team* and 1.3.1T: *Vision for Data Use* as a guide, identify the departments and people who will be essential in helping the District Data Team fulfill all five key functions necessary to support data use in the district, which were previously noted in this module.

Depending on the size and composition of the district departments, you may need to involve people from several different departments. Finding the right people to fill each post on the Team may be challenging if they have not participated in the process to this point. As potential members or department heads who have not participated previously are communicated with, consider sharing the District Data Team's vision statement to help them understand the importance of their participation.

When assembling a District Data Team, it is important to think strategically about who will be on the team and why. The following questions provide some guidance:

- What are the perspectives and expertise needed to fulfill the District Data Team's vision and priority functions?
- Who is familiar with and/or supportive of using inquiry and data to inform decisions?
- Who has solid skills in analyzing and explaining data?
- Who has credibility with stakeholders and can champion inquiry and data use with others?
- Whose participation would help the Team address current barriers to effective data use? (Note that this could lead the Team to include individuals who might be hesitant or resistant to processes of inquiry and data use, not just those who are already on board)

- Who thinks creatively and can share a fresh out-of-the-box perspective on both analysis and action planning?
- Who has a solid understanding of programs, initiatives, and other efforts taking place across the district?
- Who has a deep commitment to improving the learning of all students and the practice of all adults involved in educating them?
- Who understands the concepts of team, consensus, and unified messages?
- Who is likely to be able to commit time and energy to a multi-year effort to establish and maintain a district-wide culture of inquiry?

The most effective District Data Teams have members who want to support the inquiry process through the use of data and are broadly representative from a district perspective.

The District Data Team must be led by a **data champion**. This individual should have the positional authority and credibility to ensure:

- The District Data Team has the resources and supports necessary to function effectively
- The work of the District Data Team is understood and visible to others in the district
- The work of the Team will be acted upon

The Team must also have a **data manager** who is in charge of the more technical aspects of the work, such as:

- Coordinating data use throughout the district
- Establishing systems to ensure the cleanliness and quality of the data
- Integrating different data systems
- Ensuring all users are using the same data dictionary and terminology

It is also critical that the superintendent shows support for the inquiry process and the work of the District Data Team by modeling data use and visibly responding to the needs of the Team.

Core Data Team members will be determined within the context of the local setting, but could include:

- Data champion (chairperson)

The most effective District Data Teams have members who want to support the inquiry process through the use of data and are broadly representative from a district perspective.

- District-level data manager
- Director of pupil personnel services/special populations
- Assistant superintendent for instruction
- Director of assessment, research, and evaluation
- Directors of elementary and secondary education
- Literacy and mathematics coaches
- Special projects coordinators, e.g., SLCs
- Principals, lead teachers, or other school-based faculty

While broad representation is important, it is also essential that the Team not be too large. One approach is to form a core Data Team of six to eight members who will do most of the collection, analysis, dissemination, and coordination work, and establish a more broadly representative group of adjunct Data Team members who will provide input in specific areas and general feedback to the core group.

The **Adjunct Data Team** members could include:

- Subject-area directors
- School-level data team chairs
- Principals
- Grants director
- Union leadership
- School board member
- Parent association representative
- Teachers and other school-based faculty

Remember to provide administrative support for the Team's work, which might include taking notes at Team meetings, producing materials, and generating specific data displays.

LAUNCHING THE DISTRICT DATA TEAM

Prior to beginning the district-wide inquiry process, the District Data Team must get organized and begin to build its capacity to drive inquiry throughout the district. Some initial steps many districts have found useful are noted here.

1. **Obtain** clearly stated and visible support from the superintendent—in both written and oral communications.
2. **Meet** with district administrators to clarify the purpose of the initiative, how it relates to the district’s mission and goals, the role of the Data Team, and the Team’s decision making authority.
3. **Establish** clear relationships and lines of communication among the Data Team and other teams at the district and building levels, e.g., district leadership team, school improvement teams, departmental teams, grade-level teams, or professional development teams.
4. **Organize** itself to do the work by:
 - Agreeing to always set an agenda for Team meetings that clearly delineates intended outcomes or products expected as a result of the meeting
 - Establishing group norms and using protocols to structure conversations
 - Understanding that there will be a learning curve for the Team and that the Team shouldn’t address too many essential questions at the outset
 - Agreeing to delegate tasks and expect timely completion
 - Expecting members to work between meetings to complete tasks
5. **Build** the District Data Team’s capacity before building the capacity of the school-level data teams and the district-level staff. The District Data Team should:
 - Continue to build shared values and refine a common vision for the inquiry process and data use at the district and school levels
 - Participate in ongoing professional development activities to build its capacity to use data and function constructively as a team

6. **Provide** adequate time for the Team to understand, develop, and complete its work. Time is the dearest resource in a school or district, and insufficient time will sorely limit the Team's effectiveness.
- Data Team members need enough time to share information, generate understanding, and determine next steps
 - Data Teams need uninterrupted, protected time for collaboration, in addition to time for capacity building, professional development, and collaboration with the school-level data teams (more time will be necessary during the launching phase than in subsequent phases)

Activity 1.4 Data Team Meetings



The *Norm Setting Protocol* will help the Team articulate and agree on ways of working together in order to foster risk-tasking and effective communication during tricky conversations. The templates provide models for agendas and capturing meeting minutes, in order to assure productivity and high-quality communication during and after meetings.

(1.4.1T: Norm Setting Protocol)

(1.4.2T: Data Team Meeting Agenda)

(1.4.3T: Data Team Meeting Minutes)



TAKING STOCK OF CURRENT DATA AND PROCESSES

Before a newly established District Data Team dives into a process of inquiry, it should first take stock of a few key elements related to data use in the district. Given the Team’s functions of data management and professional development in particular, it should consider what is being done to promote data literacy district-wide, as well as document what data are available to whom and when.

TYPES OF DATA THAT INFORM INQUIRY

Often when people think of data, they think of numbers, and particularly student assessment data. However, data refer to a much wider range of evidence and include any factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation.³

Any data team, but a District Data Team in particular, has a responsibility to consider data from multiple sources in order to gain an understanding of the quality of work being done in service of teaching and learning—not only in the classrooms, but in all areas of the district. The Team can increase the validity of its inferences and conclusions if it taps a variety of data sources to provide more information about the question being investigated. This may involve comparing different forms of the same type of data, such as results from different types of assessments. Alternately, the Team may compare two entirely different types of data, such as comparing achievement to the length of time a student has been enrolled in the district, or the length of time the student spends travelling to school.

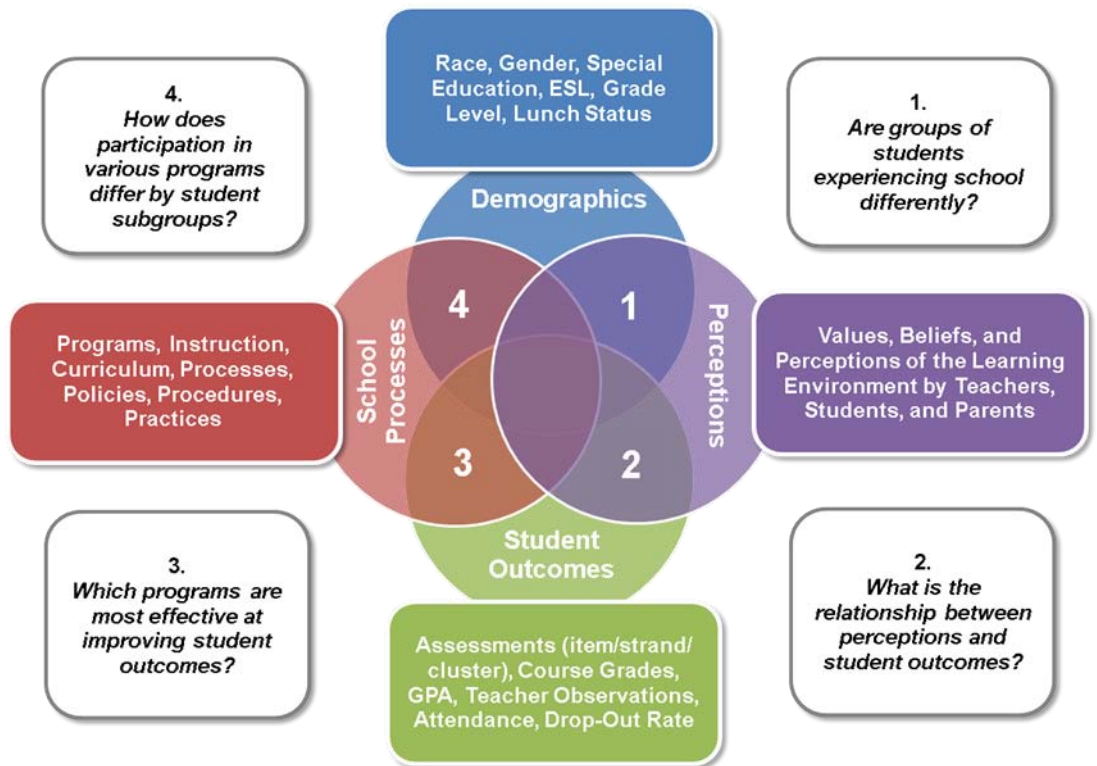
Four important types of data:

Student Outcomes
Demographics
Perceptions
Processes

The graphic below, based on the work of Victoria Bernhardt⁴, outlines four primary domains of data: student outcomes, demographics, perceptions, and school (or district) processes. This lens highlights the fact that student achievement data provide only one view on the work of a district. The Data Team must also analyze data related to processes such as hiring, procurement, and even facilities maintenance, or perceptions of stakeholders, in order to gain new insight on the supports needed from the district to take teaching and learning to the next level. This may mean looking for data in forms other than numbers that can be easily counted,

and also considering data generated by what one sees (such as through *Learning Walkthrough* site visits) or hears (such as through stakeholder surveys and focus groups).

This diagram also describes the interaction of data from the four primary domains and the kinds of inferences that can be drawn from the intersections.



Adapted from: Bernhardt, V. L. (2004). *Data Analysis for Continuous School Improvement*. Larchmont: Eye on Education

It is important to note that of these four domains, only one can be directly modified by a District Data Team (or anyone else, for that matter), and that is processes. It is only by changing the way adults interact and conduct business that a district can hope to shift the evidence it sees in the realms of demographics, perceptions, and student outcomes.

DATA INVENTORY

With this lens of the four domains, the District Data Team can inventory the data available in the district, when they are available, how readily they can be accessed by the Team for consideration in the inquiry process, and how they are being used in service of teaching and learning. Completing this inventory serves multiple functions. It can help a district:

- Gain a clearer picture of the data currently available to guide inquiry at all levels in the district, and how they are being used
- Identify data that are being collected, but that are not necessarily well-used
- Identify redundancies in data collection that could be eliminated
- Identify additional data elements needed to address district and school improvement and inquiry processes
- Communicate expectations for what to do with particular data

The data inventory provides a framework to collect both district-wide and school-based data. School-based data are not necessarily collected in other schools in the district. These data, such as those generated through use of a commercial off-the-shelf assessment or screening tool, or a school-designed survey for families, can provide some value to district inquiry processes since they can shed light on how a particular school functions. Yet school-based data also have their limitations, most significantly that they do not enable “apples to apples” comparisons to other schools.

In promoting a district-wide culture of inquiry and data use, a district should consider the benefit of promoting and analyzing common district-wide data. For example, student assessment data are only useful for district-wide inquiry and analysis if they represent every student across the district in the same relative time span. Examples of common assessments include:

- Statewide tests such as MCAS or MELA-O
- Commercial benchmark assessments or screening tools that are used with all students in a particular population district-wide
- Locally developed assessments such as common mid-terms and finals created by district personnel

Other forms of common district-wide data include:

- District financial statements

The data inventory provides a framework to collect both district-wide and school-based data.

- Human resources tracking systems
- Student transportation information

Common district-wide data allow the Team to examine a snapshot of a given population at a given time, and also help get various stakeholders talking in the same language.

A data inventory, coupled with expectations for what to do with particular data, can help the district establish standard procedures or processes for what to do with certain data like a benchmark assessment. For this reason, the district might consider sharing this inventory widely with school leaders, teachers, and other stakeholders, as well as referencing it for its own use. The district might also consider having each school complete the inventory, then compare the results across schools. For example, the district may learn that some schools are using a particular assessment that the district would want to expand. Or the district might notice a pattern between the types of assessments used at a school and the achievement results of its students.

Activity 1.5 Conducting a Data Inventory



This activity will help determine current availability and use of data and will identify additional data elements needed to further the inquiry process. *1.5.2T: Data Inventory Template: SIMS and EPIMS Data* is pre-populated with information on these state-wide data elements. *1.5.3R: ESE Data Resources* may be useful to reference for information on this and data the state provides for districts.

(1.5.1T: Data Inventory Template)

(1.5.2T: Data Inventory Template: SIMS and EPIMS Data)

(1.5.3R: ESE Data Resources)

DATA COLLECTION

For the available data to further the inquiry process, they must be complete, accurate, and timely. Collection and distribution tools and processes need to be efficient and effective to ensure that these criteria are met.

Data collection is people-centered. In order to have complete and accurate information provided in a timely manner, it is essential that the people who are responsible for data collection are well trained and well supported. Successful data collection occurs when those responsible for collecting data:

- Understand and are invested in what the data will be used for
- Understand how the data they collect will be integrated into other systems
- Participate in the creation of and agree to the use of a common Data Collection Practices handbook
- Are adequately trained to complete the task
- Have appropriate tools to support the collection process
- Work in an environment free from distraction
- Are provided the time to collect the data and ensure the data's integrity

Without this support, it is highly likely that the district will not get valid information, which in turn would detract from its ability to make quality evidence-based decisions.

The District Data Team can contribute to the effective collection and distribution of data by continually monitoring the needs of the district; the effectiveness of the tools in place for data collection, storage, and dissemination; and the training of those who are responsible for data collection and input. One of the most important things that members of the Team can do is listen and respond to the needs of the staff in charge of the data collection process.

Activity 1.6 Data Collection Self-Assessment

This activity will assist you in describing the tools and systems in place for the collection, storage, and dissemination of data, and in evaluating the effectiveness of these tools and systems.

(1.6.1T: Data Collection Self-Assessment)



DATA DISSEMINATION AND ACCESS

Collecting complete and accurate data in a timely manner means little if the data are not disseminated for use by stakeholders. It is important for all members of the district community to know what data are available, which data will be disseminated to whom, how the data are to be used, and when the data will be refreshed, e.g., a new set of data produced. Now that the District Data Team has a firm understanding of those factors, the Team can publish this information through a data dissemination schedule.

However, the Team must also pay close attention to who is given access to what data, and why. Federal, state, and local regulations determine who can have access to personally identifiable data. The Massachusetts Department of Elementary and Secondary Education has published guidelines regarding access to data that comply with these regulations. Each district also has privacy policies to inform decisions regarding access to data. Specific access guidelines have been developed by the ESE for the ESE Education Data Warehouse. These guidelines can serve as a model for the development or critique of locally developed guidelines for data access.

Beyond compliance with federal, state, and local data access regulations, the District Data Team must consider the logistics involved in providing appropriate data in a user-friendly and timely manner to those who need it. Faithful use of the data dissemination schedule will ensure that a large segment of the community will be provided with the data that it needs. Some may have access to data through the student information system, while others will gain access through use of the ESE Education Data Warehouse. It is important for the District Data Team to be sensitive to the data needs of the district as a culture of systemic data use evolves, and to act to meet those needs.



Activity 1.7 Data Dissemination and Access

The data dissemination activity can help a District Data Team construct and publish a schedule for the distribution and use of major data elements.

- (1.7.1R: Data Dissemination Schedule Example)
 - (1.7.2T: Data Dissemination Schedule Template)
 - (1.7.3R: ESE Policies for Data Access)
-

DATA LITERACY

To effectively use the data available to them, principals, teachers, district-level staff, and the community need certain knowledge and skills. It is particularly important that the members of the District Data Team have competencies in data and assessment literacy. Additionally, each of these stakeholders needs to develop a shared understanding of the purposes and uses of various data as they pertain to their roles in serving students. Stakeholders must understand what data to use when, the uses and limits of specific assessments, ways to interpret and use the various reports produced by those assessments, and specific statistical terminology and calculations used in those reports. A successful District Data Team will

take time to ensure that its members have a degree of assessment literacy that sets them up for success not only in their own inquiry processes, but also as they begin to model inquiry and data use for others.

For each standardized assessment used in the district, there are unique details about test and item construction that must be communicated to and understood by all consumers of the test. This includes teachers, principals, and other staff as they analyze results in preparation to take action, as well as parents and students as they receive reports designed to inform them of specific areas of strength, challenge, and progress toward attaining proficiency in core curriculum standards.

Methods by which each of these consumers will gain this specialized knowledge need to be well planned and implemented to ensure that the data are used properly and safely in service of students.

The following tools and sources of information can be helpful in planning ways to improve the level of data literacy in a District Data Team, as well as across the district.

Activity 1.8 Assessment Literacy

These resources will help a District Data Team develop its assessment literacy, as well as that of other stakeholders in the district.

(1.8.1T: Data Literacy Training Catalog)
(1.8.2R: Assessment Glossary)





MANAGING THE CHANGE PROCESS

WHY IS CHANGE MANAGEMENT NECESSARY?

The challenge is to both *implement* the change while also *managing* the change process.

An earlier section in this module provided guidance to reflect on a district's barriers to the effective use of data to improve practice. These barriers are often symptoms of something else. Richard Sagor (1992)⁵ suggests that some resistance may stem from the fact that teachers are, for the most part, already doing what they believe is best for their students. Teachers and other district personnel may be slow to adopt a new initiative because they cannot see how it would benefit their students or others for whom they are responsible. They may also feel a sense of loss—for example, of competence—if they are asked to approach their work differently than they have for the last 5, 10, or 20 years.

When presenting a new initiative designed to develop or enhance a culture of inquiry and the use of data to inform educational decision making, the District Data Team and others who are supporting the initiative must be prepared to manage the stress and push back that will naturally occur.

The challenge is to both implement the change while also managing the change process. When introducing or enhancing a cultural norm of a truly collaborative learning community—one where all members regularly ask questions about their practice and what more can be done in service of student learning and achievement—the Team must pay attention to the human element, the students and adults who are being asked to approach work differently in order to achieve new outcomes.

WHAT CAN A DISTRICT DATA TEAM DO?

To effectively meet the challenge posed by the change process, the District Data Team must acknowledge that resistance is a natural process and that the District Data Team and others have the power and responsibility to mitigate the negative impact this phenomenon can produce.

A District Data Team can use the following framework as a guide when introducing the inquiry process district-wide. The guidelines suggest steps that the Team can follow to support school-level data teams and other teams within the district as it initiates the first steps in the collaborative Data-Driven Inquiry and Action Cycle.

Build Awareness

- Build a vision for data use that is grounded in positive student outcomes
- Articulate the vision for district-wide systemic data use clearly and repeatedly with all stakeholders to paint an evident image of how the future will be better if all engage in this work
- Develop and communicate a sense of positive urgency
- Share the structure and function of the District Data Team with school-level teams

Understand Concerns

- Talk openly with staff at all levels in the district about stress they may experience as change is implemented
- Actively listen: solicit and act upon the concerns of staff members to facilitate the change process
- Acknowledge losses that people may feel as they shift established habits and approach their work in new ways

Model the Process

- Lead by example, not by edict
- Publicly demonstrate how the District Data Team is moving toward the vision
- Present the district-level data overview with school-level participants and other district stakeholders
- Design district-level action plans using the Data-Driven Inquiry and Action Cycle

Manage the Process

- Conduct and maintain a data inventory (2.2.17) that includes school-level data
- Coordinate the upload of local data to the ESE Data Warehouse
- Maintain an up-to-date data dissemination schedule (3.2.27)
- Disseminate relevant data sets and displays for school-based action

Monitor the Process

- Coordinate district- and school-level focusing questions
- Provide feedback to school-level teams on the effectiveness of the data displays that they construct
- Work with all teams within the district to support the monitoring of their action plans

Build Capacity

- Develop a broad base of support among all stakeholders
- Lead a discussion of how the vision can be realized through the action of school-level teams
- Involve staff in collaborative and objective analysis of data to answer the high-interest questions that they have developed
- Help schools and district offices form data teams
- Provide support to school-level teams as they utilize the resources of the Toolkit
- Provide professional development to help district personnel build assessment literacy and use relevant data warehouses
- Assist schools as they learn to prepare local data for upload to centralized data warehouses
- Provide professional development activities to build assessment literacy

Celebrate Success

- Positively reinforce movement toward desired goals for a culture of inquiry and data use as well as improved student achievement

Over time, with patience, perseverance, and strategic action, the District Data Team can help the district as a whole establish and/or enhance a cultural norm in which inquiry and data use is a regular part of everyone's work, where data are regarded as impartial evidence that can spark a question, trigger an idea, or measure a result.



Activity 1.9 Managing and Understanding Change

This protocol can help a District Data Team gain a better understanding about the concerns of stakeholders as it engages in this work.

(1.9.1T: Managing Change and Understanding Concerns Protocol)



MODULE SUMMARY

This module explores the roles and functions of a District Data Team to set the course for data use in the district and support the establishment of a culture of inquiry. It discusses the value of a vision statement for data use and provides guidance on how to create or refine one. Setting and communicating the vision for how the district will use data to make decisions is key to success with the inquiry process outlined in the remainder of the Toolkit's modules.

The module also addresses data management activities that provide a foundation for a culture of inquiry and data use, such as tracking the data that are being collected in the district, who is using the data and how.

Any new initiative or way of approaching the work of teaching and learning will likely take some time to gain traction. Taking some time to consider how the district will manage the change process and address the uncertainties felt by stakeholders can go a long way toward promoting the success of the District Data Team's efforts.

If you have not yet done so, consider administering the *District Data Team Self-Assessment* at this time (0.2.1T). It will help the Team identify its strengths and challenges related to an inquiry process, providing guidance on how to use the remaining resources in the Toolkit.

REFERENCES

- ¹ Ingram, D. S. (2004). Accountability policies and teacher decision making: Barriers to the use of data to improve practice. *Teachers College Record*, 106(6), 1258–1287.
- ² Curtis, R. E. and E. A. City. (2009). *Vision: Keeping the end in mind*. Chapter 4 in *Strategy in Action*. Cambridge, MA: Harvard Education Press.
- ³ <http://www.merriam-webster.com/dictionary/data> (December 24, 2009)
- ⁴ Bernhardt, V. L. (2004). *Data Analysis for Continuous School Improvement*. Larchmont: Eye on Education.
- ⁵ Sagor, R. (1992). *How to conduct collaborative action research*. Alexandria, VA: Association for Supervision and Curriculum Development (ASCD).

For more information on this and other district support resources, or to share feedback on this tool, visit <http://www.doe.mass.edu/sda/ucd/> or email districtassist@doe.mass.edu.



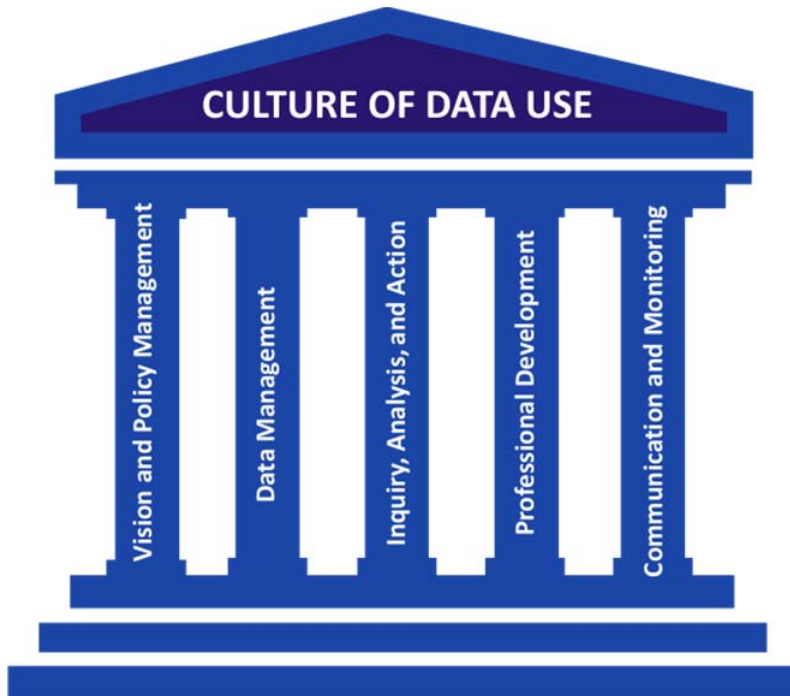
FUNCTIONS OF A DISTRICT DATA TEAM

1.1.1T

| | |
|--------------------|---|
| Purpose | To understand the role and functions your District Data Team fulfills to support a culture of data use. |
| Description | Team members will review the functions of a District Data Team and think specifically about how these tasks are accomplished within its district. The Team will also identify gaps that might exist on the Team and begin thinking about how to address them. |
| Time | 45 minutes to an hour. |

Related Documents

1–Getting Ready Module



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–A District Data Team is responsible for establishing the supports necessary for everyone throughout the district to create and sustain a culture of inquiry and data use. To do this, a District Data Team fulfills five essential functions.”

—*Module 1: Getting Ready*

FUNCTIONS OF OUR DATA TEAM

STEP 1) Use the table below to brainstorm the specific tasks already being performed in the district within each function. Allow individual think/work time before sharing and charting everyone’s ideas. (See *Module 1: Getting Ready* for explanations of the five functions)

| Vision and Policy Management | Data Management | Inquiry, Analysis, and Action | Professional Development | Communication and Monitoring |
|------------------------------|-----------------|-------------------------------|--------------------------|------------------------------|
| | | | | |

FUNCTIONS OF OUR DATA TEAM

STEP 2) Reflect on the results of the brainstorm by discussing the following questions. It may be useful to have for reference the results of the District Data Team Self-Assessment.

- 1) In which functional area(s) is the district performing particularly well? What is the evidence?

- 2) Which function is currently the district's biggest challenge? What is the evidence? What is getting in the way of success in those areas?

- 3) What key tasks, if any, are missing from the list of tasks currently being performed?

- 4) What tasks are the greatest priority for the coming year, given the district's strategic priorities and improvement plan?

- 5) Which of these tasks are dependent on cross-departmental cooperation? (Note which departments).

- 6) Which tasks are currently being performed exclusively within one department? (Note which departments).

- 7) If the District Data Team is going to fill all of these key tasks and functions, whom does the Team need to have as members? (Identify by name and/or role).



BARRIERS TO EFFECTIVE DATA USE

1.2.1T

| | |
|--------------------|--|
| Purpose | To identify barriers or problems your Team might face regarding data use. |
| Description | The District Data Team will make a list of possible barriers or problems that might slow its progress. You will also begin to think about solutions to them. |
| Time | 30 minutes. |

| |
|--|
| Related Documents 1–Getting Ready Module |
|--|

As a team, brainstorm a list of the barriers the district currently faces in creating and/or maintaining a culture of inquiry that is embedded in everyone’s work. Try to identify a range that includes cultural, technical, and political barriers. As a team, identify which barriers are the most significant and that, if addressed, would result in the greatest shift toward an embedded culture of inquiry. For each of these prioritized barriers, identify possible strategies and people who can help address these barriers. Try to think out of the box in identifying these people, looking beyond titles and positions. Keep this list accessible as the Team works through this module and the rest of the Toolkit. These barriers will become areas of focus for the District Data Team.

| Barrier | Cultural, Technical, or Political? | Possible Strategy to Address | People to Involve in the Solution |
|----------------|---|-------------------------------------|--|
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|--------------------|---|
| Purpose | To develop a shared vision for data use that will guide the District Data Team’s work. |
| Description | Team members will develop a shared vision for data use in the district and craft a vision statement to drive the Team’s work. |
| Time | About 2 hours. (Can be done in two blocks). |

| |
|--|
| Related Documents 1–Getting Ready Module |
|--|

If the district already has a vision statement that incorporates data use, locate it and use this guide to assess and revise it if necessary. If there is no reference to data use in the existing district vision, use this guide to draft a vision statement to guide the work of the Team.

If the Team has completed *1.2.1T: Barriers to Effective Data Use*, it may want to have those notes available for reference.

FINDING A SHARED HORIZON

A vision statement looks to the future and defines how things will be improved over their current status. Some vision statements have a fairly long view (for instance, 3–5 years in the future), and some seek to define changes that will be in place in less than a year.

1. Let the Team know that the purpose of the activity is to begin to articulate a vision for the work of the Team. The actual writing of the vision statement will come later.
2. Provide each person on the Team with a large note card or sticky note and instruct them to individually write a vision for data use in the district. Guide them by asking a specific question such as:
 - If this team were to be successful in promoting data use, what would that look like?
 - What do we want the future of data use in the district to look like?

You might also ask members to consider:

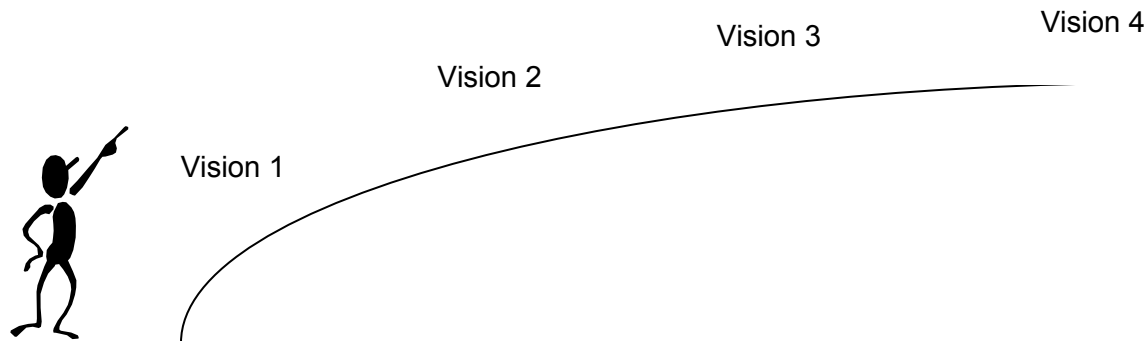
- The data use practices needed to fulfill the district’s mission
- The functions of a District Data Team identified in *1.1.1T*
- The barriers to effective data use identified in *1.2.1T*
- What things would look like if an important problem were resolved

Provide about 5 minutes of silent work time and let them know that responses will be shared.

3. Once everyone has had a chance to write his or her vision statement, let the group know that the next step is to work together to sort the notes in relative order, so that the most immediate aspirations come early (Vision 1 or 2), while the longer-term aspirations are near the end of the horizon line (Vision 3 or 4).

In preparation for this, each individual should review what he or she wrote and write each separate thought onto a different card or sticky note.

4. Draw a diagram similar to the one below on chart paper or a white board, or label sections on a wall.



The curved line represents the future, while under the person's feet is current reality.

5. Once all Team members have completed visions and separated statements onto separate cards (if necessary), they attach their note to the diagram.
6. Review all the statements, discuss and arrange the notes until all members of the Team are satisfied with the order.
7. As a Team, review the assembled statements and add any key ideas that seem to be missing. Also ask if anyone has any questions or concerns about any of the ideas, and whether anyone would have a hard time getting 'on board' with them.

The Team now has a view of a shared strategic focus. The diagram outlines priority areas of need to be addressed by the District Data Team and is beginning to paint a picture for data use in the district.

If the district has a vision for data use already written, compare it to the array of ideas the Team has just created. Determine if the existing vision is in alignment with the shared strategic focus the Team just developed. If there is not alignment, consider whether it is the existing vision or the Team's strategic focus that may need revision.

Note: This process can be modified for use in other settings, such as crafting or revising a district's vision for education. The key is to articulate a clear guiding question to focus the initial work in step 1.

CRAFTING A VISION STATEMENT

If the district does not have an existing data use vision statement, follow the steps below to craft a vision statement.

1. On a new piece of chart paper, write the following sentence starter:

In ___ years, our district will accomplish _____ by doing _____.

2. Ask each member of the Team to write a statement that incorporates the Team's shared strategic focus using the sentence starter as a guide.
3. Record each person's draft vision statement on chart paper (or an electronic document displayed with a projector).
4. Review the statements as a Team. Look for opportunities to combine similar ideas and identify unique ideas.
5. Merge all of the ideas into a clear statement of the district's vision for data use. The statement may be multifaceted or bulleted, but it should include the essential elements of the original sentence starter.
 - a. A timeframe
 - b. Accomplishments or goal statements
 - c. Methods or strategies that will be used to achieve the vision
6. Refine the statement until all members of the Team are satisfied that it captures the Team's priorities and vision for data use in the district.
7. Consider the authority with which the District Data Team has been charged. Does the vision need to be approved by another team? How will this vision be finalized and communicated to district leadership, schools, and other stakeholders?



| | |
|--------------------|---|
| Purpose | Tools for launching or supporting the work of a District Data Team. |
| Description | This protocol will establish the norms under which the District Data Team will operate. Setting norms helps keep unproductive behaviors in check while fostering risk-taking and effective communication during tricky conversations. |
| Time | 15–30 minutes. |

Related Documents

1–Getting Ready Module
1.4.2T: Data Team Meeting Agenda
1.4.3T: Data Team Meeting Minutes

3–5 minutes

Invite people to reflect in writing on the response to this question “**In order to reach our vision, what norms will we need?**” Explain that norms are guidelines for an interaction or meeting, and can include both process (e.g., start and end on time) and content (e.g., taking risks with our questions and ideas).

5–10 minutes

Invite people to share norms. It’s sometimes best to do this round-robin style so that you hear one from each person, and then open it up for other ideas. **Record the norms on chart paper or using a computer and projector.** You don’t need to write these exactly as stated—just capture the idea.

10–20 minutes

Ask if there are any norms people have a question about (sometimes people will ask a clarifying question about what something means) **or couldn’t live with** during future meetings. You may need to rephrase or reframe norms to pose them in a way that everyone is comfortable with. **When everyone seems clear and comfortable with the list, ask if there is anyone who can’t live with and support these norms.**

Note: Norms are only valuable if the Team regularly references them and holds each other accountable for upholding them. Consider establishing a few rituals to keep the Team’s norms alive, such as:

- Posting norms and/or including them in any printed agenda
- Building in time at the end of each meeting, or at periodic times in the year, to reflect on the extent to which the Team is upholding norms, and whether any norms need to be added, modified, or removed
- Rotating the role of process observer, whose job it is to pay attention to whether norms are followed



DATA TEAM MEETING AGENDA

1.4.2T

| | |
|--------------------|---|
| Purpose | Tools for launching or supporting the work of a District Data Team. |
| Description | This template is a good model for meeting agendas that lead to productive meetings. |
| Time | Ongoing. |

| |
|-----------------------------------|
| Related Documents |
| 1–Getting Ready Module |
| 1.4.1T: Norm Setting Protocol |
| 1.4.3T: Data Team Meeting Minutes |

Location:

Meeting Date:

Agenda

| Item # | Subject | Presenter |
|--------|---------|-----------|
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Resources

| Items/Resources to Bring to Meeting | Items/Resources to Be Distributed at Meeting |
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Data Team Norms: (List all norms established and recorded by the Data Team—this list should appear on all meeting agendas.)



DATA TEAM MEETING MINUTES

1.4.3T

| | |
|--------------------|---|
| Purpose | Tools for launching or supporting the work of a District Data Team. |
| Description | To improve the effectiveness and efficiency of quality communication, it is a good idea to capture meeting minutes accurately and efficiently. This template can serve as a good model to follow. |
| Time | Ongoing. |

| |
|----------------------------------|
| Related Documents |
| 1–Getting Ready Module |
| 1.4.1T: Norm Setting Protocol |
| 1.4.2T: Data Team Meeting Agenda |

| | |
|----------------------------|--|
| Location | |
| Meeting Date | |
| Submitted by (name) | |
| Submitted date | |

| Members present | Name | Role |
|------------------------|--------------|--------------|
| | (list names) | (list roles) |
| | | |
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|-------------------------------|---------------------------|-----------------|
| Agenda Item # | | |
| Subject | | |
| Discussion | | |
| Decisions/Action Steps | Person Responsible | Timeline |
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| Agenda Item # | | |
| Subject | | |
| Discussion | | |
| Decisions/Action Steps | Person Responsible | Timeline |
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| Agenda Item # | | |
| Subject | | |
| Discussion | | |
| Decisions/Action Steps | Person Responsible | Timeline |
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Insert rows for additional agenda items as needed.



DATA INVENTORY TEMPLATE

1.5.1T

| | |
|--------------------|--|
| Purpose | To develop an inventory of currently available data and how the data are being used in service of teaching and learning. |
| Description | Complete the attached templates to determine current availability and use of data in the district. |
| Time | 1–2 hours to review template; 1–2 weeks to gather information, with ongoing upkeep. |

Related Documents

1–Getting Ready Module
1.5.2T: Data Inventory
Template: SIMS
and EPIMS Data
1.5.3R: ESE Data
Resources

NOTES:

- The sections of this Data Inventory align to the four domains of data described in the text of the *Getting Ready* module: demographics, district and school processes, stakeholder perceptions, and student outcomes.
- 1.5.2T has been pre-populated with all the data elements collected for SIMS and EPIMS.
- If the Team has completed 1.8.1T *Data Literacy Training Catalogue* or 2.2.1T *Inventory of District and School Initiatives*, it may want to have those results available for reference for this process.
- A Team might want to copy and paste these tables into Excel in order to be able to sort and group the information.

DIRECTIONS:

1. Organize data elements into district-wide and school-based data:
 - a. District-wide Data is common across all schools, a set of grade-alike schools (e.g. elementary) or at least across a given population (e.g. all 5th graders, all English Language Learners, or all students who receive free or reduced lunch)
 - b. School-based Data is that which is not necessarily collected in other schools in the district, such as data a principal decides on his or her own to collect and use with school personnel, or data for unique programs such as Expanded Learning Time or pilot schools.
2. For each assessment or element, provide the indicated information in the columns to the right.
 - a. Location/Owner of Data refers to the physical location of the data, e.g., Education Data Warehouse or school paper files.
 - b. Access refers to the degree to which the data are available to District Data Team members. (1 = hard to access; 4 = easily accessible).
 - c. Current Data Use describes how the data are used to inform decisions at the district, school, and/or classroom level.
3. Consider involving others in the data collection:
 - a. Ask personnel such as the SIS data manager, assessment coordinator, or guidance director to contribute information.
 - b. Consider having each school complete sections A2, B2, C2, and D2, in order to learn what schools collect and how the data are used.

<<District Name>> Data Inventory

SECTION A1— Demographic Data: District-wide Measures

Instructions: In the table below, list all the district-wide data elements currently collected that relate to the demographics and indicators of *all* students, teachers, and other district staff, e.g., race, gender, special education, ELL, grade level, lunch status, program participation, cost per pupil, average teacher salary, or time on learning. Not all columns may apply to all elements.

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|----------------|--|----------------------------|---------------------|--------------|------------------|
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| (add more rows as needed) | | | | | | |

<<School Name>> Data Inventory

SECTION A2— Demographic Data: School-based Measures

Instructions: In the table below, list all the data elements currently collected related to the demographics and indicators of *only some* students, teachers, and other district staff, e.g., race, gender, special education, ELL, grade level, lunch status, program participation, cost per pupil, average teacher salary, or time on learning. Not all columns may apply to all elements.

| Data Element | School | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|--------|----------------|--|-------------------------------|------------------------|-----------------|------------------|
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| (add more rows as needed) | | | | | | | |

<<District Name>> Data Inventory

SECTION B1 — District and School Processes: District-wide Measures

Instructions: In the table below, list all district-wide data elements currently collected that relate to the many processes that take place in the *district*. This includes information on (or generated by) specific programs, instruction, curriculum, professional development, hiring, finances, facilities, technology, and district policies. Not all columns may apply to all elements.

| Data Element | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|--|-------------------------------|------------------------|-----------------|------------------|
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| (add more rows as needed) | | | | | |

<<School Name>> Data Inventory

SECTION B2— District and School Processes: School-based Measures

Instructions: In the table below, list all the data elements currently collected that relate to the many processes that take place in the *schools*. This includes information on (or generated by) specific programs, instruction, curriculum, professional development, hiring, finances, facilities, technology, and district policies. Not all columns may apply to all elements.

| Data Element | School | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|--------|--|-------------------------------|------------------------|-----------------|------------------|
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| (add more rows as needed) | | | | | | |

<<District Name>> Data Inventory

SECTION C1— Stakeholder Perception Data: District-wide Measures

Instructions: In the table below, list all the district-wide data elements currently collected that relate to the values, beliefs, and perceptions that teachers, students, parents, and other stakeholders have of the working and learning environment of the district. This includes data from surveys, focus groups, program evaluations, and other formal feedback systems. (Not all columns may apply to all elements).

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|----------------|--------------------------------------|-------------------------|---------------------|--------------|------------------|
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| (add more rows as needed) | | | | | | |

<<School Name>> Data Inventory

SECTION C2— Stakeholder Perception Data: School-based Measures

Instructions: In the table below, list all the data elements collected by schools that related to the values, beliefs, and perceptions that teachers, students, parents, and other stakeholders have of the working and learning environment of the district. This includes data from surveys, focus groups, program evaluations, and other formal feedback systems. (Not all columns may apply to all elements).

| Data Element | School | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|--------|----------------|--------------------------------------|-------------------------|---------------------|--------------|------------------|
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| (add more rows as needed) | | | | | | | |

<<District Name>> Data Inventory

SECTION D1— Student Outcome Data: District-wide Measures

Instructions: In the table below, list the name of each student outcome measure that is currently collected for **all** students in a given grade level district-wide. Examples include common assessments (such as MCAS, MELA-O, or common mid-terms), as well as other outcome data (mobility, course grades, GPA, attendance and graduation). For each assessment, provide the indicated information in the columns to the right. (Not all columns may apply to all elements). If an element is not collected for all students in a given grade, record it in Section A2.

| Data Element | Grade Level(s) | Content Area(s) | Date Administ-ered | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|----------------|-----------------|--------------------|--|---------------------|--------------|--|
| <i>Attendance rate</i> | <i>All</i> | <i>N/A?</i> | <i>Daily</i> | <i>Student Information Management System (SIS)</i> | <i>Monthly</i> | <i>2</i> | <i>Monthly principal attendance reports.</i> |
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| (add more rows as needed) | | | | | | | |

<<District Name>> Data Inventory

SECTION D2— Student Outcome Data: School-based Measures

Instructions: In the table below, list the data elements related to student outcomes that are currently collected for *only some* students at the same grade-level district-wide. For example, some schools may implement commercial assessments that others do not. For each student outcome data element, provide the indicated information in the columns to the right. (Not all columns may apply to all elements).

| Data Element | School | Grade Level(s) | Content Area(s) | Date Adminis-tered | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---------------------------|--------|----------------|-----------------|--------------------|-------------------------|---------------------|--------------|------------------|
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| (add more rows as needed) | | | | | | | | |



DATA INVENTORY TEMPLATE: SIMS AND EPIMS DATA

1.5.2T

| | |
|--------------------|--|
| Purpose | To develop an inventory of currently available data and how the data are being used in service of teaching and learning. |
| Description | The attached template is pre-populated with the data elements collected for SIMS and EPIMS. Districts can use this as a starting point to determine current availability and use of this data in the district, in conjunction with other data identified in the district's Data Inventory. |
| Time | 1–2 hours to review template; 1–2 weeks to gather information, with ongoing upkeep. |

Related Documents

1–Getting Ready Module
1.5.1T: Data Inventory Template
1.5.3R: ESE Data Resources

Notes:

- This tool is meant to be used in conjunction with *1.5.1T: Data Inventory Template*, which has further guidance and directions.
 - The *DOExxx* series represents data elements from the Student Information Management System (SIMS)
 - The *IDxx*, *SRxx*, and *WAXx* series represent data elements from the Education Personnel Information Management System (EPIMS)
- For descriptions and more information on these data elements see:
 - SIMS Version 2.1 Data Handbook <http://www.doe.mass.edu/infoservices/data/sims/DataHandbook.pdf>
 - EPIMS Data Handbook: <http://www.doe.mass.edu/infoservices/data/epims/>

Directions:

1. For each data element identified, confirm the information that is pre-populated, and complete the remaining columns.
 - a. Location/Owner of Data refers to the physical location of the data, e.g., Education Data Warehouse or school paper files, and/or the person or department who is responsible for collecting the data and ensuring their quality.
 - b. Access refers to the degree to which the data are available to District Data Team members. Rate Access on a scale of 1–4 (1 = hard to access; 4 = easily accessible).
 - c. In the Current Data Use column, describe how the data are currently used to inform district-level decisions. The Team can decide if it also wants to describe how the data are used to inform decisions at the school or classroom levels.

<<District Name>> Data Inventory

SECTION A1— Demographic Data: District-wide Measures (SIMS and EPIMS Data)

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|--|----------------|--|-------------------------------|------------------------|-----------------|------------------|
| The <i>DOExxx</i> series represents data elements from the Student Information Management System (SIMS) | | | | | | |
| DOE001 – Locally Assigned Student Identifier (LASID) | All | All | | | | |
| DOE002 – State Assigned Student Identifier (SASID) | All | All | | | | |
| DOE003 – Student First Name | All | All | | | | |
| DOE004 – Student Middle Name | All | All | | | | |
| DOE005 – Student Last Name | All | All | | | | |
| DOE006 – Student Date of Birth | All | All | | | | |
| DOE007 – Date of Birth Format | All | All | | | | |
| DOE008 – City/Town of Birth | All | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| DOE009 – Gender | All | All | | | | |
| DOE010 – Race/Ethnicity | All | All | | | | |
| DOE011 – Reason for Reporting | All | All | | | | |
| DOE012 – Enrollment Status at Time of Data Collection | All | All | | | | |
| DOE013 – Reason for Enrollment | All | All | | | | |
| DOE014 – City/Town of Residence – Student | All | All | | | | |
| DOE015 – School Identification Number | All | All | | | | |
| DOE016 – Grade Level | All | All | | | | |
| DOE017 – Days in Attendance | All | All | | | | |
| DOE018 – Days in Membership | All | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| DOE019 – Low-Income Status | All | All | | | | |
| DOE020 – Title I Participation | All | All | | | | |
| DOE021 – LEP Students in their First Year in U.S. Schools | All | All | | | | |
| DOE022 – Immigration Status | All | All | | | | |
| DOE023 – Country of Origin | All | All | | | | |
| DOE024 – First (Native) Language | All | All | | | | |
| DOE025 – Limited English Proficiency | All | All | | | | |
| DOE026 – English Language Learners Program Status | All | All | | | | |
| DOE027 – Alternative Education | All | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|--|--------------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| DOE028 – Title I School Choice Participation | All | All | | | | |
| (DOE029 & DOE030 were discontinued) | All | All | | | | |
| DOE031 – Career/Vocational Technical Education – Competency Attainment | All | All | | | | |
| DOE032 – Special Education Placement, ages 3–5 | Pre-K to 1 st | All | | | | |
| DOE033 – High School Completer Plans | 12 | All | | | | |
| DOE034 – Special Education Placement, ages 6–21 | 1–12 | All | | | | |
| DOE035 – Career/Vocational Technical Education – Type of Program | 6–12 | All | | | | |
| DOE036 – Special Education – Nature of Primary Disability | All | All | | | | |
| DOE037 – Graduate, Completed Massachusetts Core Curriculum | 12 | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|--|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| DOE038 – Special Education – Level of Need | All | All | | | | |
| (DOE039 has been discontinued) | | | | | | |
| DOE040 – Special Education Evaluation Results | All | All | | | | |
| (DOE041 has been discontinued) | | | | | | |
| DOE042 – Career/Vocational Technical Education – Special Population | 6–12 | All | | | | |
| DOE043 – Career/ Vocational Technical Education - Chapter 74–Approved VTE Program Participation | 6–12 | All | | | | |
| DOE044 – Career/Vocational Technical Education – Non-Chapter 74 Career and Technical Education Program Participation | 12 | All | | | | |
| DOE045 – Number of In-School Suspensions | All | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| DOE046 – Number of Out-of-School Suspensions | All | All | | | | |
| DOE047 – Advanced Placement Course 1 | All | All | | | | |
| DOE048 – Advanced Placement Course 2 | All | All | | | | |
| DOE049 – Advanced Placement Course 3 | All | All | | | | |
| DOE050 – Advanced Placement Course 4 | All | All | | | | |
| DOE051 – Advanced Placement Course 5 | All | All | | | | |
| DOE052 – Student Truancy | All | All | | | | |
| The IDxx, SRxx, and WAXx series represent data elements from the EPIMS | | | | | | |
| ID01, ID02, ID03 – Staff First, Middle, and Last Names | | All | | | | |
| ID04 – Staff Date of Birth | | All | | | | |
| ID05 – Staff Gender | | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| ID06 – License / Certification Number | | All | | | | |
| ID07 – Local Employee Number | | All | | | | |
| SR01 – Massachusetts Education Personnel Identifier (MEPID) | | All | | | | |
| (SR02 & SR03 align with ID07 and ID06, respectively) | | | | | | |
| SR04 – SR07 align with ID01–ID04, respectively) | | | | | | |
| SR08 – Race-Ethnicity | | All | | | | |
| SR09 – Employment Status at Time of Data Collection | | All | | | | |
| SR10 – Reason for Exit | | All | | | | |
| SR11 – Date of Hire | | All | | | | |
| SR12 – Federal Salary Source 1 | | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|--|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| SR13 – Percent of Federal Salary Source 1 | | All | | | | |
| SR14 – Federal Salary Source 2 | | All | | | | |
| SR15 – Percent of Federal Salary Source 2 | | All | | | | |
| SR16 – Federal Salary Source 3 | | All | | | | |
| SR17 – Percent of Federal Salary Source 3 | | All | | | | |
| SR18 – Degree Type 1 | | All | | | | |
| SR19 – Degree Institution 1 | | All | | | | |
| SR20 – Degree Subject 1 | | All | | | | |
| SR21 – Degree Type 2 | | All | | | | |
| SR22 – Degree Institution 2 | | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| SR23 – Degree Subject 2 | | All | | | | |
| SR24 – Degree Type 3 | | All | | | | |
| SR25 – Degree Institution 3 | | All | | | | |
| SR26 – Degree Subject 3 | | All | | | | |
| WA01 – Massachusetts Education Personnel Identifier (MEPID) | | All | | | | |
| WA02 – (see ID07– Local Employee Number) | | All | | | | |
| WA03–WA05 (see ID01–ID03) | | All | | | | |
| WA06 – District / School Identification Number | | All | | | | |
| WA07 – Job Classification | | All | | | | |
| WA08 – Teacher / Paraprofessional Assignment | | All | | | | |

| Data Element | Grade Level(s) | Program/ Department/ Content Area(s) | Location/ Owner of Data | Date Data Available | Access (1–4) | Current Data Use |
|---|-----------------------|---|--------------------------------|----------------------------|---------------------|-------------------------|
| WA-09 – Grade | | All | | | | |
| WA10 – Subject Area-Course Code | | All | | | | |
| WA11 – Class Section | | All | | | | |
| WA12 – Full Time Equivalent (FTE) (as per DSSR) | | All | | | | |
| WA13 – NCLB Instructional Paraprofessional Requirements | | All | | | | |
| WA14 – Highly Qualified Teacher Status | | All | | | | |
| WA15 – Subject Matter Competency | | All | | | | |



ESE DATA RESOURCES

1.5.3R

| | |
|--------------------|--|
| Purpose | This group of resources and tools can help a District Data Team understand what data is made available to districts by the Massachusetts Department of Elementary and Secondary Education, what it means, how to access it, and how to use it effectively. |
| Description | Website links to the most current information on a variety of data sources. |
| Time | Ongoing. |

Related Documents

1–Getting Ready Module
1.5.1T: Data Inventory Template
1.5.2T: Data Inventory Template: SIMS and EPIMS Data

The majority of data available from the ESE resides in one of two locations:

1. Education Data Warehouse: A collaborative effort of ESE and local school districts to centralize K–12 educational performance data into one state-coordinated data repository hosted by the Department. It contains the SIMS and MCAS data for every district in the state and will soon contain the EPIMS data for every district in the state. Data are available at the level of the state, district, group, and individual student. Over 30 reports exist to compare data from individual schools and districts to state totals. After receiving appropriate training, districts can load local data into the EDW and write their own reports. EDW training materials and data can be accessed via the security portal. EDW Quick Tips and the EDW User Guide from the Information Service’s Education Data Warehouse are available for download on the EDW webpage: <http://www.doe.mass.edu/infoservices/dw/>.
2. School/District Profiles: Sortable data reports on a variety of information, including enrollment, teacher data, and MCAS results. Data are available at the level of the state, district, and group, but not at the level of individual student. Directories and reports from individual organizations can also be found here: <http://profiles.doe.mass.edu/>.

Other sources of data are indicated as appropriate.

The MA ESE also publishes an annual data collection schedule which includes forms, descriptions of data, technical guidance, and access information for data that are transmitted from districts to the state:

<http://www.doe.mass.edu/infoservices/data/schedule.html>.

ESE Data Resources

| Data Element and Brief Description | Release Schedule | Source of Data | User Guides and Other Resources |
|--|-------------------------------|--|---|
| <p>Massachusetts Comprehensive Assessment System (MCAS): Designed to test all public school students in the state, measure performance based on the Massachusetts Curriculum Framework learning standards, and report on the performance of individual students, schools, and districts.</p> | <p>Annually, in June</p> | <p>Data Warehouse School/District Profiles</p> | <p>http://www.doe.mass.edu/mcas/</p> <p>Information on MCAS participation and graduation requirements, testing schedules, test administration resources, test design and development, sample questions, scoring guides, technical reports and results, as well as information on training sessions for the above.</p> <p>Additional guidance is available in the Data Warehouse trainings, which can be accessed through the security portal.</p> |
| <p>Adequate Yearly Progress (AYP): A measure of the extent to which a student group demonstrates proficiency in English language arts and mathematics based on MCAS results. AYP Reports are issued each year and show the progress schools and districts are making toward the goal of having all students reach proficiency by the year 2014.</p> | <p>Annually, in October</p> | <p>See link in next column</p> | <p>http://www.doe.mass.edu/sda/ayp/</p> <p>Access to reports on AYP data as well as the review and release schedules, baseline and improvement data, student performance goal spreadsheet, and interpretive materials. Includes information on the Composite Performance Index (CPI).</p> |
| <p>Student Growth Percentile: The growth model complements the MCAS year-by-year test scores, since it reports change over time rather than grade-level performance results in any one year.</p> | <p>Annually, in September</p> | <p>Data Warehouse School/District Profiles</p> | <p>http://www.doe.mass.edu/mcas/growth/</p> <p>Links to student growth scores at the level of district, school, and student group, as well as resources for understanding and using the data.</p> |

ESE Data Resources

| Data Element and Brief Description | Release Schedule | Source of Data | User Guides and Other Resources |
|--|--|---|--|
| <p>Massachusetts English Proficiency Assessment–Reading/Writing (MEPA-R/W): Assesses LEP students' proficiency in reading and writing at grades K–12.</p> <p>Massachusetts English Language Assessment–Oral (MELA-O) assesses LEP students' proficiency in listening (comprehension) and speaking (production) at grades K–12.</p> | Early June | See link in next column | <p>http://www.doe.mass.edu/mcas/mepa/</p> <p>Reports of results as well as information on English Language Proficiency Benchmarks and Outcomes (ELPBO), student participation requirements, sample student work and scoring guides, MEPA test administration resources, and information on training for the above.</p> |
| <p>EPIMS: Collects demographic data and work assignment information on individual public school educators, enabling Massachusetts to comply fully with the No Child Left Behind Act by accurately reporting on highly qualified teachers. EPIMS replaced the DSSR (District School Staffing Report).</p> | Three times a year (starting in SY2011) | Education Data Warehouse (beginning in 2010) | <p>http://www.doe.mass.edu/infoservices/data/epims/</p> <p>Data collection training materials, data handbook, list of support specialists, maintenance tutorials, FAQs, and a list of vendors.</p> <p>Note: Beginning in SY2011, EPIMS data will be collected in October, March, and at the end of the year, and are generally available in the EDW 2–3 months later.</p> |
| <p>SIMS: A student-level data collection system that allows the Department to collect and analyze more accurate and comprehensive information, to meet federal and state reporting requirements, and to inform policy and programmatic decisions. Includes a unique student identifier for all students receiving a publicly funded education in Massachusetts.</p> | Three times a year | Education Data Warehouse | <p>http://www.doe.mass.edu/infoservices/data/sims/</p> <p>SIMS user guide, data handbook, and other training guides, as well as information on SIMS expansion, SDDR, reporting schedule, reporting guidelines, FAQs, and information on vendors.</p> <p>Note: SIMS data is collected via the security portal in October, March, and at the end of the year, and are generally available in the EDW 2–3 months later.</p> |

ESE Data Resources

| Data Element and Brief Description | Release Schedule | Source of Data | User Guides and Other Resources |
|---|------------------|-------------------------|--|
| <p>Statistical Reports. The ESE provides statistical reports in the following areas:</p> <ul style="list-style-type: none"> • Graduation rates • Grade retention reports • Dropout rates • Educator data • Enrollment data • Plans of high school graduates • Student exclusions • School and district data reports • State profile | Varies | See link in next column | <p>http://www.doe.mass.edu/infoservices/reports/</p> <p>Links to other ESE web pages with data and additional information on each type of statistical report.</p> <p>Note: The Select Report list for School and District Data Reports has some but not all of the same reports available in the Quick Statewide Reports list on the School and District Data Reports page itself.</p> |
| <p>Statistical Comparisons. The ESE provides statistical comparisons for districts in the following areas:</p> <ul style="list-style-type: none"> • Per pupil expenditure reports • Enrollment trends • Average teacher salaries • Special education direct expenditure trends • School and district data reports • State profile | Varies | See link in next column | <p>http://finance1.doe.mass.edu/statistics/</p> <p>Links to data reports and supporting resources. Some data sets allow for easy comparison to similar districts, and can be easily downloaded as Excel files.</p> |



DATA COLLECTION SELF-ASSESSMENT

1.6.1T

| | |
|--------------------|---|
| Purpose | To assess the effectiveness of data collection systems. |
| Description | For data to effectively provide information to further the inquiry process, they must be complete, accurate, and disseminated in a timely manner. Within a busy district or school environment, this is often difficult to achieve. This activity provides an opportunity for the District Data Team to identify strengths and areas for improvement in the district's data collection, storage, and dissemination systems. |
| Time | 30 minutes to develop a distribution plan. Variable for data survey completion and tabulation. One hour for survey analysis. |

Related Documents

1–Getting Ready Module

Directions

1. The District Data Team should familiarize itself with the self-assessment instrument and delete any items necessary to adapt it to the Team's local situation.
2. As a team, determine who should participate in the survey process.
3. Distribute the instrument to the target audience.
4. Collect and tabulate the results.
5. Analyze the results to determine the effectiveness of the data collection, storage, and dissemination systems.
6. Recommend changes to improve the system as necessary.

Data Collection, Storage, and Dissemination Self-Assessment

This survey is designed to gather your perception of the efficiency and effectiveness of data collection, storage, and dissemination in your district. Please share your perceptions by indicating your degree of agreement with the following statements.

| Data Task | Statement about Data | Strongly Disagree | Disagree | Agree | Strongly Agree | Not Applicable |
|------------------------|---|-------------------|----------|-------|----------------|----------------|
| Data Collection | Policies and protocols are in place to guide data collection in the district. | 1 | 2 | 3 | 4 | N/A |
| | A schedule is in place that indicates when various data elements should be collected. | 1 | 2 | 3 | 4 | N/A |
| | There are staff charged with collecting data. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting the data have a clear understanding of what the data will be used for. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting the data know the protocols for inputting the data, e.g., field names and locations. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting the data are provided with an environment that promotes the accurate input of data, e.g., free of distractions, no conflicting tasks. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting data have adequate time to complete their tasks. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting the data have been trained in data input techniques and data use concepts. | 1 | 2 | 3 | 4 | N/A |

| Data Task | Statement about Data | Strongly Disagree | Disagree | Agree | Strongly Agree | Not Applicable |
|---------------------|---|--------------------------|-----------------|--------------|-----------------------|-----------------------|
| | Appropriate hardware is available to expedite the collection of data. | 1 | 2 | 3 | 4 | N/A |
| | Appropriate software applications are available to facilitate the collection of data. | 1 | 2 | 3 | 4 | N/A |
| | Protocols are in place to monitor the accuracy and completeness of the data inputted. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with collecting data adhere to district guidelines for recording data. | 1 | 2 | 3 | 4 | N/A |
| | State and federal confidentiality regulations are followed by those responsible for collecting data. | 1 | 2 | 3 | 4 | N/A |
| | Systems are in place to ensure that complete and accurate data are recorded. | 1 | 2 | 3 | 4 | N/A |
| | Staff who are responsible for data collection are included in establishing data collection protocols and policies. | 1 | 2 | 3 | 4 | N/A |
| | Staff charged with the collection of data are consulted to determine changes that need to be made to improve data collection processes, e.g., accuracy, completeness, security. | 1 | 2 | 3 | 4 | N/A |
| Data Storage | Data are added to the student information system in a timely manner. | 1 | 2 | 3 | 4 | N/A |

| Data Task | Statement about Data | Strongly Disagree | Disagree | Agree | Strongly Agree | Not Applicable |
|----------------------------------|---|--------------------------|-----------------|--------------|-----------------------|-----------------------|
| | Data stored in the student information system can be easily uploaded to the data warehouse. | 1 | 2 | 3 | 4 | N/A |
| | Data from various sources can easily be uploaded to the central district storage medium. | 1 | 2 | 3 | 4 | N/A |
| | Web-based applications are in place to facilitate the uploading of data to the central district storage medium. | 1 | 2 | 3 | 4 | N/A |
| | Data are archived to provide the basis for longitudinal analysis. | 1 | 2 | 3 | 4 | N/A |
| <i>Data Dissemination</i> | Data can easily be retrieved from the student information system and/or data warehouse to provide reports that answer specific questions. | 1 | 2 | 3 | 4 | N/A |
| | A system exists to facilitate the acquisition of data by staff to answer questions to improve teaching and learning. | 1 | 2 | 3 | 4 | N/A |
| | Reports are routinely generated and disseminated to key staff to answer questions related to improving teaching and learning. | 1 | 2 | 3 | 4 | N/A |
| | Staff members know how to access data that they need to answer questions to improve teaching and learning. | 1 | 2 | 3 | 4 | N/A |

| Data Task | Statement about Data | Strongly Disagree | Disagree | Agree | Strongly Agree | Not Applicable |
|-----------|---|-------------------|----------|-------|----------------|----------------|
| | Reports generated through the district data information systems are easy for staff to understand. | 1 | 2 | 3 | 4 | N/A |
| | Reports are disseminated in a timely manner. | 1 | 2 | 3 | 4 | N/A |



DATA DISSEMINATION SCHEDULE EXAMPLE

1.7.1R

| | |
|--------------------|---|
| Purpose | To communicate data availability and use broadly throughout the district. |
| Description | This is an example of a Data Dissemination Schedule. |
| Time | Ongoing. |

Related Documents

- 1–Getting Ready Module
- 1.7.2T: Data Dissemination Schedule Template
- 1.7.3R: ESE Policies for Data Access

Scenic Cove School District Sample Data Dissemination Schedule 2009–2010

| Time Frame | Data Displays | Disseminated To | Purpose | Action |
|------------|---|---|--|--|
| August | Longitudinal Trends MCAS (2002–2009) Subtests | Data overview presentation to the district leadership team | Collaborative problem identification and clarifying question formulation | <ol style="list-style-type: none"> 1. Articulate problem 2. Craft clarifying questions 3. Identify additional data needed 4. District Data Team collects and analyzes data and builds data displays for next meeting |
| | Opening of school demographics and program participation By grade level By team | Principal Team leaders | Overview of composition of school and teams | Balance teams |
| September | Middle school performance of incoming ninth graders by team | Principal Team leaders Grade 9 teachers | Identify populations in need of intervention | Conduct a data overview for each school-level team |
| | Lists of students in at-risk populations, e.g., Grade 8 Failures; Grade 8 Poor Attendance. | Grade 9 team leaders and teachers | Identify specific students for intervention | Develop interventions as necessary for identified students at the team or grade level |



DATA DISSEMINATION SCHEDULE TEMPLATE

1.7.2T

| | |
|--------------------|---|
| Purpose | To communicate data availability and use broadly throughout the district. |
| Description | In this activity, a District Data Team will construct and publish a schedule for the distribution and use of major data elements. |
| Time | Ongoing. |

Related Documents

1–Getting Ready Module
1.7.1R: Data Dissemination
Schedule Example
1.7.3R: ESE Policies for Data
Access

<<District Name>>
Data Dissemination Schedule
 <<School Year>>

| Time Frame | Data Displays | Disseminated To | Purpose | Action |
|-------------------|----------------------|------------------------|----------------|---------------|
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |
| January | | | | |
| February | | | | |
| March | | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |



ESE POLICIES FOR DATA ACCESS

1.7.3R

| | | |
|--------------------|---|---|
| Purpose | To connect districts to current ESE policies for data access in order to inform district policies on data access and dissemination. | Related Documents 1–Getting Ready Module 1.7.1R: Data Dissemination Schedule Example 1.7.2T: Data Dissemination Schedule Template |
| Description | These documents should be reviewed, and corresponding district policies developed, prior to disseminating data within the district. | |
| Time | N/A. | |

These ESE Education Data Warehouse resources provide background information necessary for a District Data Team, in conjunction with the district’s Information Technology Department, to assign data access consistent with federal, state, and local regulations.

| Website | Brief Description |
|---|--|
| 1 http://www.doe.mass.edu/info services/dw/accesspolicy.pdf | <p>The Statewide Educational Data Warehouse Project Policy Statement outlines the legal authorities at both the federal and state levels that govern the information exchange and access, and confidentiality of student records and personally identifiable information.” It provides information on:</p> <ul style="list-style-type: none"> • User agreements • Confidentiality policies • Third party access to information in the Data Warehouse |
| 2 http://www.doe.mass.edu/info services/dw/chapter2.pdf | <p>The Security and Training in Chapter Two of the Education Data Warehouse User Guide provides information on:</p> <ul style="list-style-type: none"> • Security and user administration • Maintaining confidentiality • Suppressing aggregate data for small groups • Responsibilities of the directory administrator • District data access policies • Training district users |



DATA LITERACY TRAINING CATALOG

1.8.1T

| | |
|--------------------|---|
| Purpose | This group of resources and tools will help a District Data Team build district-wide capacity to use data. |
| Description | This template will help the Team identify the training and support the district currently provides for data literacy. |
| Time | Ongoing. |

Related Documents
 1—Getting Ready Module
 1.8.2R: Assessment Glossary

Directions

1. Begin by listing the data used in your district. If you have completed *1.5.1T: Data Inventory*, you can use that list of data elements. If you have not yet completed a data inventory, you may want to begin by focusing this activity on the most commonly used data elements.
2. After you have listed the data, complete the next three columns.
3. As you consider each data element, make note of any opportunities for improvement.

| Data Element | Training or Resource Provided | Audience | Department Responsible |
|--------------|-------------------------------|----------|------------------------|
| | | | |
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| Data Element | Training or Resource Provided | Audience | Department Responsible |
|---------------------|--------------------------------------|-----------------|-------------------------------|
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| | |
|--------------------|--|
| Purpose | This group of resources and tools will help a District Data Team build district-wide capacity to use data. |
| Description | This document outlines general assessment terminology. |
| Time | Ongoing. |

Related Documents
1–Getting Ready Module
1.8.1T: Data Literacy
Training Catalog

Note: These terms apply primarily to student assessment data, but could be extrapolated to apply to other forms of data, such as those related to adult practice or district systems and processes.

Aggregated Data: Data that are presented in summary (as opposed to student-level data or data broken down by student group).

Alignment: Judgmental procedures undertaken to ensure the content of state tests appropriately reflects the knowledge, skills, and abilities articulated in the state’s content standards for each grade level and subject area.

Benchmark: A standard against which something can be measured or assessed.

Cohort: A group of individuals sharing a particular statistical or demographic characteristic.

Decile: One of ten segments of a distribution that has been divided into tenths. The ninth decile shows the number (or percentage) of the norming group that scored between 80 and 90 NCE.

Disaggregation: Summary data split into different subgroups, e.g., gender, race, ethnicity, lunch status.

Distractor: An incorrect option in a multiple choice test item.

Equating: A set of statistical procedures undertaken in order to a) adjust for differences in the difficulty of different test forms for the same subject area and grade level from year-to-year (horizontal equating), or b) scale test scores (and/or performance levels) so they have a consistent meaning across adjacent grade levels (vertical equating, vertical scaling, vertical articulation or moderation).

Formative: Assessments at regular intervals of a student’s progress designed to provide information to improve the student’s performance.

Gain Score: The difference between two administrations of the same test. A student can have either a positive or negative gain.

Generalization: Application of inference to a population greater than the sample.

Inference: A conclusion that is drawn from a data set. The process of using data from a sample of students to generalize to other similar groups of students, such as assuming the observed three-year upward trend in 10th grade mathematics achievement will continue next year.

Item: An individual question or exercise in an assessment or evaluative instrument.

Mean: The average of a set of scores.

Measure: Outcome data that can be used to measure the performance of a student or group of students. Includes test scores, attendance, discipline, grades, and credits earned.

Median: The score that is the midpoint in a series of scores; half of the data values are above the median, and half are below.

Mode: The score that occurs most frequently in a series of scores.

Norm Group: A group of students with similar characteristics, i.e., age, number of months from the start of the school year, number of years in school, selected to take a test to provide a range of scores and establish the percentiles of performance for use in establishing scoring standards.

Normal Curve: The bell-shaped curve of the normal distribution.

Normal Curve Equivalent: A score that ranges from 1–99 often used to compare different tests for the same student or group of students on the same test. Mathematically, an NCE is a normalized test score with a mean of 50 and a standard deviation of 21.06.

Normal Distribution: A distribution of scores where the scores are distributed symmetrically above and below the mean.

Norm-Referenced Test: Standardized tests designed to compare the scores of children to scores achieved by children the same age who have taken the same test.

Percent Correct: A percentage that expresses the number of raw points earned by a test taker divided by the number of raw points possible on the test.

Percent Proficient: The percentage of students who scored higher than the cut score defined by the test.

Percentile: A score that indicates the percentage of a reference or norm group obtaining scores equal to or less than the test-taker's score.

Performance Assessment: Assessments that measure skills, knowledge, and ability directly through a performance or demonstration by the student.

Population: Every student who is eligible to become a member of a specific sample of students. For example, the population of 10th graders is all 10th graders who may be enrolled in the district.

Quartile: A division of percentile scores into four equal groups. For example, Q1 = 0 to 25th percentile scores.

Range: The difference between the highest and lowest score in a distribution of scores.

Raw Score: The number of points earned on a test or subtest.

Reliability: The degree to which the results of an assessment are dependable and consistently measure particular student knowledge and/or skills. Reliability is an indication of the consistency of scores across raters, over time, or across different tasks or items that measure the same thing. Thus, reliability may be expressed as a) the relationship between test items intended to measure the same skill or knowledge (item reliability), b) the relationship between two administrations of the same test (or comparable tests) to the same student or students (test/retest reliability), or c) the degree of agreement between two or more raters (rater reliability). An unreliable assessment cannot be valid.

Sample: Group of students included in a data set. For example, the group of 10th graders in a district for any one school year is a sample of the entire population of 10th graders who may be enrolled in the district. The extent to which that group of 10th graders is representative of the entire population is the extent to which generalizations can be made to 10th graders in the future.

Sampling Error: Statistical terminology for the possibility that a particular sample chosen to study may be unusual in some way, leading to invalid or inaccurate inferences about the characteristics of the larger population from which the sample was drawn. For example, when comparing the performance of 10th graders in one year to 10th graders in the next, it is important to bear in mind that the performance is based on two different groups (samples) of 10th graders who may have different characteristics.

Scaled Scores: In the same way that the centigrade thermometric scale can also be expressed on the Fahrenheit scale, student raw scores can be converted to scaled scores. Equating adjustments may result in different raw score ranges for performance levels from year-to-year. Raw scores can be scaled so that scaled score ranges for performance levels stay the same from year-to-year.

Scoring Rubrics: Guidelines for judgmental procedures for assigning values to student performance such as checklists, yes or no, numerical rating scales, i.e., 1-6, or descriptive, i.e., the student presented multiple points of view to support her essay.

Standard Error of Measurement (SEM): Based on the reliability of a test—the higher the reliability, the lower the SEM. SEM can be used to put an “uncertainty” band around individual raw scores and scaled scores.

Standardization: A consistent set of procedures for designing, administering, and scoring an assessment. The purpose of standardization is to assure that all students are assessed under the same conditions so that their scores have the same meaning and are not influenced by differing conditions.

Stanine: A normalized score that describes pupil performance on an equally distributed nine-point scale ranging from 1 to 9.

Subtest: A group of test items that measure a specific area, i.e., mathematics calculation and reading comprehension. Several subtests make up a test.

Summative: Assessments used to provide information in order to make a judgment about a student’s achievement at the end of a period of instruction.

Validity: The extent to which an assessment measures what it is supposed to measure and the extent to which inferences and actions made on the basis of test scores are appropriate and accurate. For example, if a student performs well on a reading test, how confident are we that that student is a good reader? A valid standards-based assessment is aligned with the standards intended to be measured, provides an accurate and reliable estimate of students’ performance relative to the standard, and is fair. An assessment cannot be valid if it is not reliable.

Definitions were compiled from the following sources:

CRESST Assessment Glossary, found at <http://www.cse.ucla.edu>;

Slaughter, R. (2008). *Assessment literacy handbook: A guide for standardized assessment in public education*. Portsmouth, NH: Public Consulting Group, Inc.

Massachusetts Department of Elementary and Secondary Education. (2008). *Data Warehouse 102 Handbook: Understanding MCAS Reporting*. Malden, MA: Author.



MANAGING CHANGE AND UNDERSTANDING CONCERNS PROTOCOL

1.9.1T

| | |
|--------------------|---|
| Purpose | To enable the District Data Team and others to gain a better understanding about its concerns and the concerns of other staff as the change to a district norm of inquiry and data use moves forward. |
| Description | In this activity, the Team will review common concerns associated with change and brainstorm ways to mitigate concerns related to the implementation of the Data-Driven Inquiry and Action Cycle. |
| Time | 30–45 minutes. |

Related Documents
1–Getting Ready Module

Note: Keep in mind that this activity is a good faith attempt to take into account the concerns of constituents, but there is no way to know for sure without asking them directly. A District Data Team may choose to follow in this protocol on its own, or to engage different stakeholders in the process through surveys or focus groups. While the former approach may take less time, the latter could generate valuable perspectives and ideas that the Team may not think of on its own.

Directions:

1. As a group, identify the stakeholders who will likely be impacted by the district's increased focus on data use, inquiry, and action.
2. Individually review the seven stages of concern that individuals commonly experience in response to a change effort. Record specific concerns the various stakeholders may have for each of the stages. Be sure to include yourself and your own concerns. Individuals may ask themselves –What am I hearing from the field?"

| Stage | General Concern | Potential Specific Concerns of Stakeholders |
|----------------------|--|---|
| Awareness | What is this change I've been hearing about? | |
| Information | Tell me everything I need to know. | |
| Personal | What does this mean for me? | |
| Management | How will I manage all of this? | |
| Consequence | What will happen if I do implement the change? What will happen if I don't? | |
| Collaboration | How can we help each other through the change? | |
| Refocusing | How can I make it even better? | |



3. Work as a group to record everyone’s responses for each of the stages. Use chart paper or project typed notes so all can see and read the responses.
 - Note: If the Team has completed *1.2.1T: Barriers to Effective Data Use*, it may want to revisit and compare the responses. Does this make the group think of any additional stakeholders that need to be considered, or concerns to address?
4. As a group prioritize* which concerns are most important for the District Data Team to address as it pursues this work, the group should narrow the list to 2–5 specific concerns. In doing this, the team might consider:
 - *Which stage, as a whole, best represents the general sentiment of the district?*
 - *Which specific concerns, if resolved, would result in the greatest shift toward an embedded culture of data use, inquiry, and action?*
 - *Which concerns does the District Data Team have the greatest potential and leverage to address?*

*One quick strategy for prioritizing is multi-voting. Give each team member a number of votes that represents 1/3 to 1/2 of the total ideas generated, e.g., if 21 ideas were generated, each member could get 8 votes. Members cast one vote for each idea they see as a priority. Tally the votes to determine which ideas are seen as the greatest priorities.
5. As a group, brainstorm ways to mitigate the impact of each of the prioritized concerns. Record the suggested strategies on a new sheet of chart paper.
 - Note: Again, it may be useful to reference the strategies generated in *1.2.1T: Barriers to Effective Data Use*

| Prioritized Concerns | Strategies for Mitigation or Resolution |
|----------------------|---|
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| | |

6. Discuss, prioritize, and come to agreement on the strategies that make the most sense to pursue at this time. Document these strategies and revisit them periodically, noting concerns that get resolved, and new ones that may emerge. The group may want to retain all of the notes from this discussion for future reference as well.