

Guide to Becoming an Effective Data Coach



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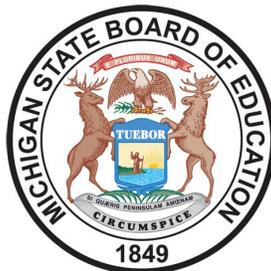
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Acknowledgements

The Michigan Department of Education and the Office of Education Improvement and Innovation (OEII) would like to thank and acknowledge individuals who assisted in the collaborative development of this Toolkit at the MDE.

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About the Guide

The **Guide to Becoming an Effective Data Coach** has been designed as a resource for schools and districts who have been awarded a School Improvement Grant (SIG). One ongoing requirement of the grant has been to provide key positions such as a SIG Coordinator, Data Coach, Parent Liaison, and Mental Health Specialist. In recent years of the grant, the Mental Health Specialist has become an option as long as the social-emotional needs of students are being met. The position of Data Coach is not unique to the School Improvement Grant; therefore, the information in this guide has been designed to address best practices and align with SIG requirements and expectations.

This guide will focus on key questions that often arise for both the Data Coach and the school and district. Each topic of the guide will provide clear explanations, *examples, and site resources. Action Planning Templates may be found throughout the guide as well. These templates are designed for your immediate use and/or manipulation to fit your context.

Data Coaches are often provided through external providers. This guide is also designed to assist districts, schools, and External Service Providers in understanding the expectations of what a Data Coach is and how she may support the school in developing a data-rich culture.

***Note:** Organizations that are cited in this guide are listed as resources and examples and are not endorsed by the Michigan Department of Education.

Table of Contents

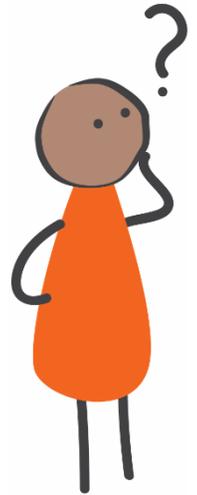
- About the Guide 4
- What is a Data Coach?..... 6
- Who should be a Data Coach?..... 6
- What is my Role as a Data Coach? 7
- Working Collaboratively at your Site 9
- Dealing with Data Shock! 15
- Knowing the School’s Strategic Plan..... 18
- Being a Data-Literate Leader 22
- Working with the Four Types of Data 24
- Planning Productive Meetings..... 39
- Displaying Visually Effective Data 47
- Professional Learning Communities (PLCs) 52
- Participating in Professional Learning 52
- Using SIG Funds to Support your Work 57
- Resources..... 59
- Conclusion..... 70

What is a Data Coach?

Being an effective Data Coach means that you are data-literate. A Data Coach serves and communicates with multiple levels within the school system, i.e. administration, teachers, and instructional support staff. A Data Coach is a facilitator, consultant, and mentor. As a facilitator, the Data Coach directs conversations. As a consultant, the Data Coach provides guidance and feedback. And as a mentor, the Data Coach provides one-on-one support.

Who should be a Data Coach?

Although there are no state or federal guidelines for becoming a Data Coach, most schools and districts typically fill this position with classroom teachers, administrators, or individuals who come from the field of education. Key to finding someone with appropriate skills or potential is to develop a rigorous job description that requires, at minimum, the following:



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

***Note:** Data Coaches that are provided through External Service Providers (ESPs) should already be highly qualified and effective in working with data. SIG funds may not be used to train personnel provided by ESPs.

What is my Role as a Data Coach?

To be an effective Data Coach a major responsibility is to create a continuous process for analyzing data. This continuous process includes developing protocols to collect, analyze and disseminate data. The Data Coach should also be responsible for organizing data-related activities such as meetings, trainings, and components of Professional Learning Communities (PLCs). As mentioned above, the Data Coach serves multiple roles (facilitator, consultant and mentor). Review each of these roles in the following section and determine how your capacity and ability align.

Data Coach as a Facilitator

An effective Data Coach facilitates the process of continuous improvement. As a facilitator, she leads collaborative conversations around the four points of data (demographic, perception, process, and student achievement). She helps administrators, teachers, and instructional staff to understand how data can be manipulated to inform, change, and/or improve student success.

Data Coach as a Consultant

An effective Data Coach serves as a consultant. He provides his expertise and knowledge for developing and implementing data plans, protocols, and processes. Plans are the framework that serve as a guide for the data team(s) to follow. Protocols are the steps for putting plans into action. Processes address how the team collects, analyzes, and develops hypotheses around data points.

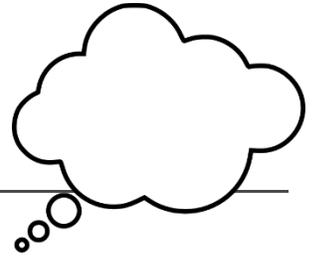
Data Coach as a Mentor

An effective Data Coach serves as a mentor to administrators, teachers and instructional support staff. When working with administrators, she may provide insight and understanding of the importance, value, and application of data. She may work one-on-one, by grade level, and/or by content area with teachers and instructional support staff to provide an understanding of how data affects student success.

How do you see yourself as a facilitator, consultant, and mentor at your site?

My Reflections

1. How do I see myself as a facilitator?



2. How do I see myself as a consultant?

3. How do I see myself as a mentor?

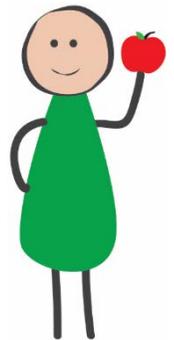
Working Collaboratively at your Site

An effective Data Coach works closely with key stakeholders in the building to ensure consistent communication surrounding data activities. As a Data Coach, consider using the following as a guide to work collaboratively with each of the positions listed below.

Working with Site Administrators and the SIG Coordinator

When working with your site administrator(s) and SIG Coordinator begin by reviewing their expectations of your role. Schedule consistent times to meet and discuss administrative duties such as goals, timelines, assignments, and expectations for working with the staff.

As a Data Coach, you should work closely with your site administrator(s) and SIG Coordinator to ensure that processes and procedures for collecting, analyzing, and disseminating data are occurring systematically, consistently, and accurately. Consider implementing these best practices:



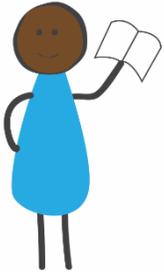
- Create a schedule to meet regularly with your site administrator(s) and SIG Coordinator.
- Review the SIG budget development toolkit to become familiar with allowable expenditures.
- Discuss procedures and protocols for requesting and submitting SIG-funded expenditures.
- Discuss collecting, analyzing, and disseminating data.

Working with the Leadership Team

One expectation of the grant and reform efforts is that the Data Coach is a member of a leadership team. Leadership teams are viewed and utilized as an advisory council to school leaders, providing various perspectives on teaching, learning and assessment (i.e., school improvement team, SIG leadership team, data team). Student success and achievement is highly intertwined with the effective use of data to inform instruction. The Data Coach is key to bringing and maintaining this perspective to the team. Review the section on "*Knowing the School's Strategic Plan*" to better understand the importance of your role in developing a data-driven culture.

Working with Teachers

Getting to know and working closely with teachers at your site will be key in developing a data-driven culture. It may be challenging at first for teachers



to dedicate time to become familiar with the components that lead to a culture that uses data. An effective Data Coach is respectful and cognizant of teachers' knowledge and understanding of data. He understands that building rapport and trust with staff is central to the success of transitioning to a data-driven culture. Consider using these best practices to create a collaborative environment:

- Ensure that your discussions not only focus on data but encompass teaching practices as a whole.
- Provide basic information on understanding the four types of data (demographic, perception, program, and student achievement).
- Provide basic information on understanding formative and summative assessments.
- Create or assist in creating templates to collect data, i.e. forms, spreadsheets, and visuals.
- Provide assessment timelines and schedules accordingly.
- Provide timely feedback and results.
- Be cognizant that your data jargon is comprehensible and meets their needs.

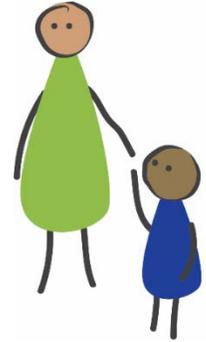
Working with Instructional Support Staff

Getting to know and working closely with instructional support staff at your site is another component in developing a data-driven culture. Begin by identifying the instructional staff, their roles, and how the impact of their work may affect student success and achievement. Once identified, work with each to align their goals, strategies, and/or activities with a data-driven culture. Consider using these best practices to create a collaborative environment:

- Ensure that your discussions not only focus on data but the connection between data, interventions, and the school's strategic plan.
- Provide basic information on understanding the four types of data (demographic, perception, program, and student achievement).

- ❑ Create or assist in creating templates to collect data, i.e. forms, spreadsheets, and visuals.
- ❑ Provide assessment timelines and schedules accordingly.
- ❑ Provide timely feedback and results.
- ❑ Be cognizant that your data jargon is comprehensible and meets their needs.

While examining data on student achievement is a major goal, collecting data on family involvement plays an important role as well. Work closely with your Parent Liaison to identify important data points such as parent literacy, homework support, and outside community involvement, to collect and analyze the school-community-home relationship and how the outcomes affect student success. Use these best practices when working closely with your Parent Liaison:



- ❑ Work together to identify events and activities that meet the schools and community needs where data may generated and collected.
- ❑ Create data collection tools for each event and activity that are easy to administer.
- ❑ Work with the Parent Liaison to analyze data.
- ❑ Help to create visually appropriate data walls and handouts.
- ❑ Help to create appropriate ways of disseminating results and soliciting feedback.

Working with Mental Health Staff

When working with Mental Health staff, the process for collecting and analyzing data will differ greatly due to the Family Educational Rights and Privacy Act (FERPA). These data points are usually limited, often excluding specific names, grades, and types of referral being handled. Work closely with your Mental Health staff to understand these parameters and to collaborate on what information is appropriate to release. Remember the goal is to determine if there is a positive impact of the services the students are receiving. Use these best practices to work effectivity to work with Mental Health staff:

- ❑ Begin by having a discussion about the release of information on individual students and mental health programs.

- ❑ Share the importance of creating a data-driven culture and the role that Mental Health staff plays.
- ❑ Work collaboratively to come to an agreement about the types of data points that can be shared.
- ❑ Assure the Mental Health staff that information received will always be treated with confidentiality.
- ❑ Create or assist in creating templates to collect data that ensure confidentiality. i.e. forms, spreadsheets, and visuals.

Working with Before/After School Program Staff and External Service Providers

If your school has staff that administer before/after school programs and/or external service provider(s), investigate these programs and services to determine the types of data points that may be included in measuring student success. Often times, peripheral services are overlooked and are not included in the overall analysis of student success. An effective Data Coach will examine all programs and activities at her site and work to collaborate with and include these services in the overall measurement of student success. If your site has a before or after school program and/or an external service provider(s), consider these best practices:

Before/After School Programs

- ❑ Create a list of all before/after school programs.
- ❑ Get to know and meet the staff to discuss program goals and activities.
- ❑ Collectively decide which programs and activities have measurable outcomes.
- ❑ Create or assist in creating templates to collect data i.e. forms, spreadsheets, and visuals.
- ❑ Help to create appropriate ways of disseminating results and soliciting feedback.

External Service Providers (ESPs)

- ❑ Determine the role of a ESP.
- ❑ Discuss what the ESP already has in place to collect, analyze, and disseminate data.

- ❑ Determine if existing ESP processes align with your schools' data-driven goals.
- ❑ Discuss limitations related to data collection for both the ESP and the school.
- ❑ If appropriate, create and assist in creating templates to collect data. i.e. forms, spreadsheets, and visuals.
- ❑ If appropriate, help to create appropriate ways of disseminating results and soliciting feedback.

Dealing with Data Shock!

An effective Data Coach is always aware of her audience. Knowing and understanding the staff culture will be key to working with all of your stakeholders. Often times, topics and tasks that involve knowledge of mathematics and/or having analytical skill can be overwhelming to participants. Many will experience “Data Shock” even before you have had the opportunity to meet with them and provide guidance around collecting, analyzing, and disseminating data.



You may experience reactions to you and your position that seem distant or defensive. Some staff members may even try to avoid you all together. The most important factor to take into consideration is that these types of reactions often have very little to do with you personally. Data is closely tied to accountability. Accountability is directly linked to teacher performance and student achievement. Understanding how to collect, analyze, disseminate, and apply data to improve instruction is a cycle of continuous review and improvement that is not automatically mastered. Remember, as the expert, you have the knowledge of how to manipulate data. This expertise can be intimidating. Consider approaching your staff in a way that mitigates stress and welcomes support and collaboration.

Review these 10 ideas that could assist you in breaking down barriers and help you to build a data-driven culture mindset:

Assess the Staff

An effective approach to reducing data shock is to simply get to know staff and their level of experience working with data. This could be accomplished with a simple survey or assessment. Consider creating a survey or simple assessment that can be completed in less than five minutes, using content that is off-beat and fun!

Develop User Guides

Consider creating a user guide with step-by-step instructions for collecting, analyzing, disseminating, and applying data. Use lots of multi-colored visuals and large text. Include procedural flowcharts and multiple samples of data charts. Explain where, when, why and how to use certain charts. Provide relevant examples. Finally, include a glossary of terminology.

Design Cheat-Sheets

A user guide may be too cumbersome for some of your participants. If so, consider developing “cheat-sheets” that takes concepts with complicated steps and provides short cuts.

Publish Quick References

Quick References are much like cheat-sheets. Each must be functional, handy, easy-to-read, durable (laminated and/or on card stock), bright and colorful (aesthetic appeal and to locate quickly), in large text and contain many visuals (remember, too small can be frustrating).

Create Icebreaker Games

Create Icebreaker Games using data at the beginning of each staff meeting or reoccurring meeting that has multiple participants.

Send Weekly Communication Samples

Start a Data Blog or send out weekly communications with sample data for teachers to review. These samples could be actual data that relates to the school or could be hypothetical. Consider using these samples as discussion starters for upcoming or regularly scheduled meetings. Ask teachers to address the following questions: (a) What is the data telling you? (b) What data can be collected, analyzed, and applied? And (c) How might the data be effectively displayed?

Conduct a Collaborative Case Study

Using school level data, conduct a collaborative case study or action research that addresses a school-wide issue. Working with data becomes less stressful when working together to examine or explore a common interest.

Create a Data-Mastery Recognition System

Recognize staff for their work and expertise pertaining to particular data points. Identify staff members who collect, analyzed, disseminate, and apply data well. Consider creating a “mastery” or “expert” buddy list or system where other teachers feel comfortable seeking out peer guidance and support.

Knowing the School's Strategic Plan

A strategic plan of the school is a document that guides how teaching and learning, culture and climate, assessment, and student needs are addressed. The School Improvement Grant (SIG) application will most likely serve as that document. Even though both Focus and Priority schools are eligible to apply for the SIG, to date, only Priority schools here in Michigan have been awarded. Since Priority schools are required to submit a Reform/Redesign (R/R) plan once identified, they have already selected and begun implementing the intervention model. The SIG application process allows for the schools to continue with their current model or to select a new model. Regardless of the choice, all models have key components that revolve around the use of data.

The Unpacking Tool

The Unpacking Tool is designed to “unpack” or to put the plan into “actionable steps.” This tool directly aligns with the components of the selected intervention plan. Although the Unpacking Tool is not another compliance document, it is a tool that should be developed and utilized by all members of the staff. The protocol of the Unpacking Tool is facilitated by using “collaborative conversations.” These conversations are typically initiated by the leadership team. For this reason, it is imperative that all of the components discussed have representation, i.e. Data Coach, Data Team, Site Administrator(s), SIG Coordinators, Parent Liaison, Mental Health staff.

This section identifies each of the intervention models and describes the components that directly address the use of data.

Intervention Models and Data Analysis

Determine which model was selected by your school and review the plan in detail. Take time to become familiar with the components of the model that specifically connect to data collection, analysis, and dissemination. Start by reviewing the model requirements below:

Transformation and Turnaround Models

- Use data to identify and implement an instructional program that is based on research and aligned from one grade to the next, as well as with state academic standards.
- Promote the continuous use of student data (such as formative, interim, and summative assessment data and student work) to inform and differentiate instruction to meet individual student needs.

Early Intervention Model

- Use data to identify and implement an instructional program that
 1. is research-based, developmentally appropriate, and vertically aligned from one grade to the next as well as aligned with State early learning and development standards and State academic standards; and
 2. in the early grades, promotes the full range of academic content across domains of development, including math and science, language and literacy, socio-emotional skills, self-regulation, and executive functions.
- Promote the continuous use of student data (such as from formative, interim, and summative assessments) to inform and differentiate instruction in order to meet student needs.

Whole School Reform Model

A “whole-school reform model” is defined as a model that:

- Is designed to improve student academic achievement or attainment.
- Is implemented for all students in a school.
- Addresses, at a minimum and in a comprehensive and coordinated manner, each of the following:
 - School leadership
 - Teaching and learning in at least one full academic content area (including professional learning for educators)
 - Student non-academic support
 - Family and community engagement

Action Planning Template for Knowing the School's Strategic Plan

Select the Intervention Model your School is Implementing

- Transformation
- Early Learning

- Turnaround
- Whole School Reform

Key Questions:

- Are you a member of the school leadership team? Yes No
- Have you reviewed the entire intervention model? Yes No
- Are you familiar with the specific components on data collection? Yes No
- Have you identified how all other components are connected to data? Yes No

Summarize the Parent Involvement Section in your own Words:

Points of Clarification: *Use this section to list any component of the plan that needs clarification.*

Summarize what your next steps are:.

Being a Data-Literate Leader

An effective Data Coach is not simply knowledgeable about data. To be effective, she must be data-literate. She must possess deep knowledge about the manipulation of data and have the ability to be interpretive, reflective, and analytical. She must also hone her skills of intuition, knowing when data is confusing or inappropriate for particular audiences.

This section of the guide refers extensively to **“Leading Schools in a Data-Rich World: Harnessing Data for School Improvement”** by Lorna M. Earl and Steven Katz (2006). For a more in-depth discussion on being a data-literate leader refer to chapter 5, “Becoming Data-Literate,” pp. 45-86.

What is a Data-Literate Leader?

A data-literate leader possess cognitive academic language proficiency in data content. Early & Katz (2006) refer to six components that constitute a data-literate leader. Review each one carefully then fill out the reflection below:

A data-literate leader...

- thinks about practice
- recognizes sound and unsound data
- is knowledgeable about statistical and measurement concepts
- recognizes other kinds of data
- makes interpretation paramount
- pays attention to reporting and audiences

I am a Data Coach who:			
Thinks about practice	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes
Recognizes sound and unsound data	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes
Is knowledgeable about statistical and measurement concepts	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes
Recognizes other kinds of data	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes
Makes interpretation paramount	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes
Pays attention to reporting and audiences	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Sometimes

If you answered "no" or "sometimes," reflect on each using the form below:

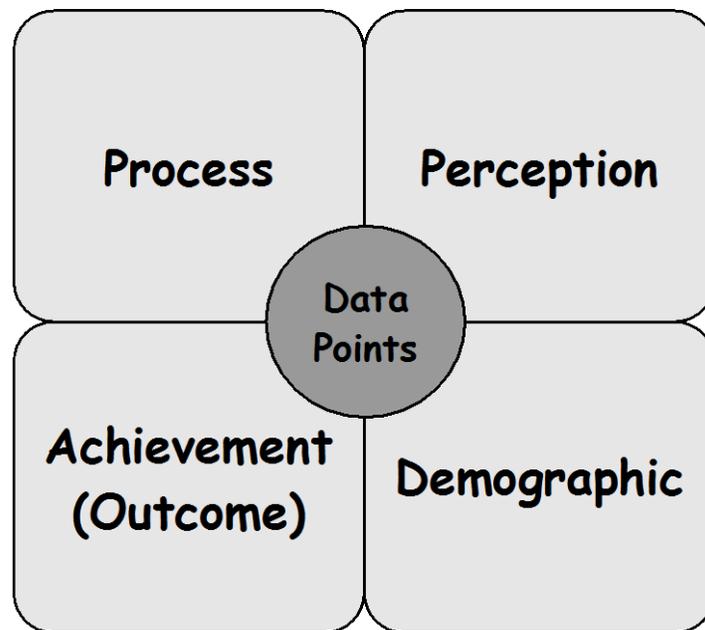
What do I currently know or do?
What is/are my goals(s) to become more data-literate?

How can I learn more?
What will be my future actions?

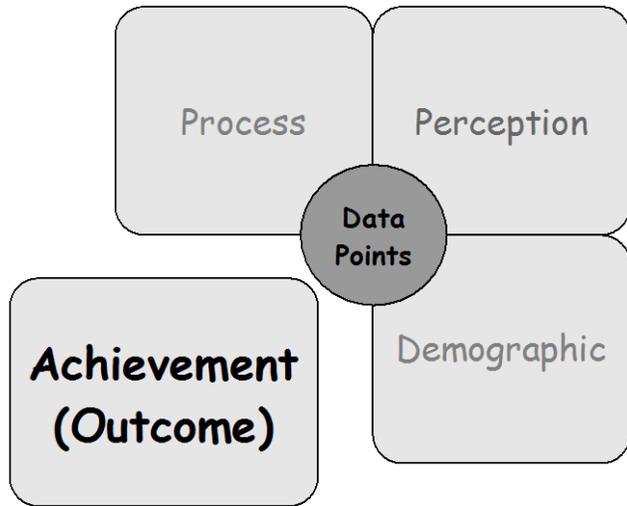
Working with the Four Types of Data

This next section of the guide will be dedicated to examining the four types of data that are used when examining student success. The four types of data or “Data Points” have no hierarchical value; therefore, they are presented in no particular order. Additionally, these four data types may be labelled differently in the field. For example, Bernhardt (2004) labels each type as follows: (a) Demographic, (b) Perceptions, (c) School Processes, and (d) Student Learning. Although the labels may vary, the definition of each type is aligned.

Begin by reviewing the diagram below. Take note that this guide will refer to each data type as (a) Demographic, (b) Perception, (c) Process, and (d) Achievement/Outcome. Throughout this section, you will have the opportunity to reflect on and list the various types of data collected at your school and in your district.



Achievement/Outcome Data



A comprehensive student achievement data plan makes use of data from three levels. These levels of data are defined as (a) annual large-scale assessment data which are summative in nature, (b) periodic assessment data which are interim in nature, and (c) ongoing classroom assessment data which are formative in nature. Each level varies according to four key elements: (1) Purpose, (2) Frequency, (3) Feedback type, and (4) Audience.

Let's begin by examining Level One: Achievement data!

Level One

Annual Large-Scale Assessment or Summative Data

Level One data, such as annual state assessments, is designed primarily for accountability purposes to report to external members of the school community giving a broad view of the school's and district's achievement levels. Its primary audiences are board members, administrators, program leaders, and the public. Level One data is also useful to curriculum teams (teachers, students, parents), who can use the information to evaluate gaps in the effectiveness of the curriculum.

Level One assessments are administered once a year and can be used as broad indicators of the school's effectiveness. Analysis of Level One assessments can be frustrating as they provide general information about the school's success, but are not helpful in evaluating student progress and do not provide useful data throughout the school year. An effective Data Coach will always point out these limitations when working closely with staff, parents, and or community members.

Now, think about your school or district's Achievement/Outcome data points. Reflect on the four key elements that distinguish one level from the other. List examples of Level One assessment being administered annually. Consider using the reflection template with teachers and other stakeholders. **Note: Remember to include assessments that pertain to special populations, i.e. English Language Proficiency, Native Language Proficiency or English Language Learners, Homeless.*

My Reflections

What is the Purpose of Level One Achievement data?
What is the Frequency of Level One Achievement data?
What type of Feedback does Level One Achievement data provide?
Who is the Audience that reviews Level One Achievement data?
Level One: <i>Annual Large-Scale Assessment or Summative Data</i>
<input type="checkbox"/>

Level Two

Periodic Assessment or Interim Data

Level Two data provide immediate results of student performance on key standards-based skills in a given content area and grade level. Periodic or interim assessments can be used by teachers and administrators to establish the entry-level or “baseline” performance of students when the year begins. The remaining interim assessments support teachers and administrators in tracking students’ progress by identifying strengths and weaknesses in particular content areas.

Level Two data can be used to create student groupings based on their changing skill levels and needs. They can also identify which students need enrichment or specialized support during the course of the school year. Level Two assessments support team data discussions about progress, consequences, and actions – helping to focus dialogue on what kind of action was taken for students with specific needs. Periodic or interim data help teams assume more responsibility for students who soar and those who struggle. An effective Data Coach will facilitate these collaborative conversations and ensure that the data being discussed is connected to curriculum, interventions, and course corrections.

Think about your school or district’s Achievement/Outcome data points again. Reflect on the four key elements that distinguish one level from the other. List examples of Level Two assessment being administered periodically and identify the assessment cycle. Consider using the reflection template with teachers and other stakeholders.

**Note: Remember to include assessments that pertain to special populations, i.e. English Language Proficiency, Native Language Proficiency or English Language Learners, Homeless.*

My Reflections



What is the **Purpose** of Level Two Achievement data?

What is the **Frequency** of Level Two Achievement data?

Who is the **Audience** that reviews Level Two Achievement data?

Level Two: Periodic or Interim Data

Assessment	Cycle of Administration
<input type="checkbox"/>	<input type="checkbox"/>

Level Three

Ongoing Classroom or Formative Assessment Data

An effective Data Coach understands that Level Three assessment data is at the heart of each classroom. Building a culture of assessment means assessing and using data as a natural part of each teacher's professional behavior. A continuum of assessment options can meet a variety of purposes. But even if teachers are implementing a variety of assessment methods, these options are meaningless unless the results are used to make decisions for improving student achievement and adjusting instruction.

The first challenge is organizing the data from classroom assessments in a way that clearly shows who is excelling and needing enrichment, who is performing on target, and who is struggling. The next challenge is finding ways to provide support to teachers in meeting these diverse needs. An effective Data Coach will always begin with the basics. Consider beginning with the school's digital tools.

Digital Tools

Digital tools (i.e. PowerSchool, Illuminate, Skyward, Synergy) must be used meaningfully. For example, electronic gradebooks should be used for charting useful information in making decisions. Every lesson, project, and unit should be based on assessment data. When meaningful data are kept and used in an electronic gradebook, charted and displayed with students, and organized in portfolios, teachers and students know what, why, and how they are learning. An effective Data Coach will be well-versed in his school's digital tools and be able to demonstrate their importance when building a data-driven culture and mindset.

Use the quick reference to think about Achievement/Outcome data:

Student Achievement/Outcome Data

Types of Student Achievement Assessments

- Norm-referenced achievement tests
- National assessments, i.e. SAT, NWEA
- State Standards-based, criterion-referenced assessments
- District assessments
- Classroom assessments (including student work)

Types of Student Achievement Scores

- Raw scores
- Percentile rank scores
- Normal Curve Equivalent (NCE) scores
- Percent of proficient students
- Scale scores

Types of Assessment Formats

- Paper/Pencil tests, i.e. multiple-choice, short answer
- Computer-based tests
- Performance Tasks, i.e. essay writing, giving a speech, conducting experiments, reading out loud
- Portfolio

Levels of Score Aggregation

- Scores for the entire school
- Scores for the entire grade
- Scores for the entire subject
- Scores disaggregated by student demographic characteristics, i.e. gender, race, language proficiency, mobility status, economic status

Think about your school or district's Achievement/Outcome data points from the perspective of level three assessment. Reflect on how well you know the digital tools accessible to you and the staff. Use the reflection template to record your responses. Then, list examples of Level Three assessment being administered on a regular basis. Consider using this template with your participants as you guide them in developing a data-rich mindset and environment.

My Reflections

What is the electronic grading system used at your school? (Or chose another digital tool)

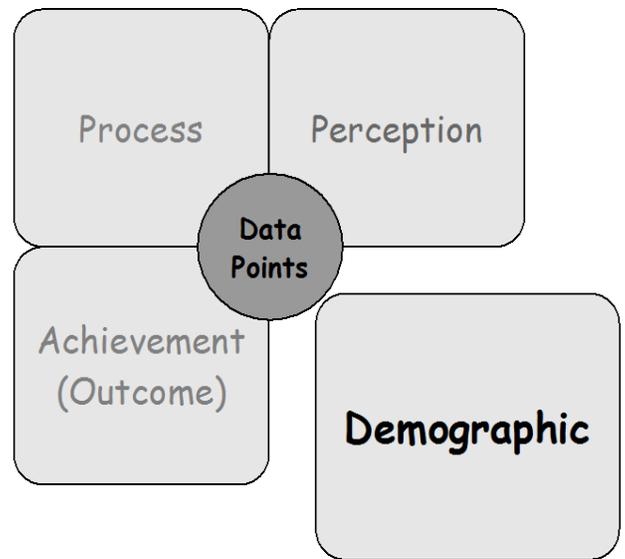
What are the strengths of this system? (List what it can do)

Level Three: On-going Classroom or Formative Assessment Data

<input type="checkbox"/>	<input type="checkbox"/>

Demographic Data

Demographic data are the second type of data to collect and evaluate. In many districts, accountability and school choice have a significant impact. The school and district must carefully track their community and know it well. When determining which demographic data to collect, the goal is to thoroughly know the school population in order to clarify problems and needs. Demographic data may be conceptualized in a dichotomy of "static" or "dynamic." Static data are variables you cannot change such as gender, ethnicity, or economic status. Dynamic data are variables that can be changed and often represent areas where interventions are in place. Behavioral data such as student attendance or school suspensions represent dynamic data.



Demographic Data should be collected that addresses the following:

- Demographic information on the students that enroll in schools and their parents
- Mobility patterns in and out of grades and schools
- Student transportation needs
- Rate of enrollments in special programs, such as English as a second language (ESL), special education, or after-school programs like the Boys and Girls Club
- Neighborhood characteristics
- Parent involvement
- Behavior and social problems of students

Consider using and sharing this quick reference when identifying and discussing demographic data with staff:

Demographic Data on Students

- Student Level
- Gender
- Race/Ethnicity
- Free/reduced lunch status
- Mobility
- % of Special Education
- % of English Learners
- School Level
- Enrollment, number of students
- Attendance: absence, tardiness
- Student behavior: suspensions, expulsions
- Dropout rates
- Graduation

Demographic Data on Staff

- Staff
- Types of teaching certificates, authorizations
- Years of experience
- Education levels

Demographic Data on Parents/Community

- Mobility
- Parents/Community
- Family structure, # in household
- Participation in conferences, school activities
- Population and housing trends
- Economic base
- Gender

My Reflections

Choose a data point from the quick reference to reflect upon!

What is the **Purpose** of the data point?

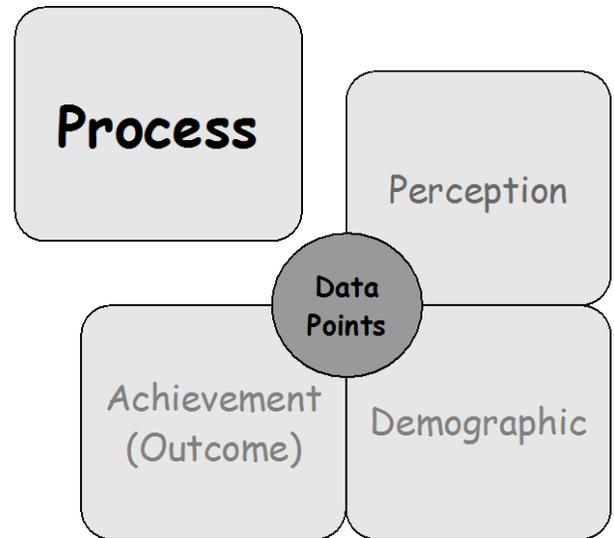
What is the **Frequency** of the data point?

What type of **Feedback** does the data point provide?

Who is the **Audience** that reviews the data point?

Process Data

Process data are the third type of data to collect and the only type of data that schools have actual control over in the educational setting. According to Bernhardt (2004, p. 136), *“Public schools cannot control who the students are, where they come from, or why they think the way they do. They only control a portion of the student learning results—through their processes, i.e. programs, practices, and instructional strategies.”*

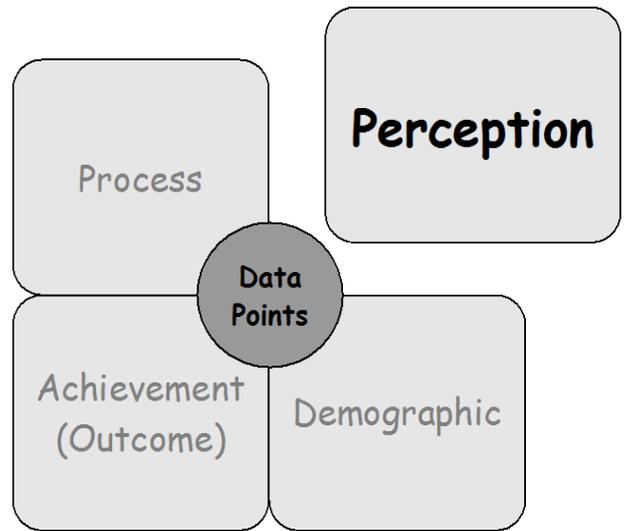


Rich sources of information about the quality of programs, practices, and instructional strategies in the school are often hidden and go uncollected. These data are not always readily quantifiable but are important and often telling in how they can support a hypothesis. Time should be taken with the leadership team to sort out the questions they have about programs and initiatives in the building. In particular, data should be collected when there are questions about student success or student achievement in programs such as, Reading Recovery, Read 180, Daily 5, NewTech, Leveled Literacy, etc. For example, data about the Internet reading demands of the NewTech program may be important to collect if there is a question about NewTech students' academic achievements.

Plans should be made prior to the school year to collect program evaluation data. The collection of these data can be seen as "action research," which involves collecting data that will inform future decision making about programs and curricula. To prepare for an analysis of educational programs, collect data that profile the enrollment in your school's programs and courses. In addition to collecting information about student enrollments and performances, participants should collect data about the implementation of standards-based curriculum.

Perception Data

Perception data are the fourth type of data to collect and evaluate. This type of data is helpful because it focuses educators' attention on the opinions and ideas of all stakeholders. Perception data may be collected and analyzed from any identified group of stakeholders and focus on any topic that is relevant to the on-going efforts of rapid turnaround and transformation. The collection of perception data should give an honest portrayal of the school and district climate. Perception data, often seen as intangible by members of the school community, can even include analyses of local newspaper editorials and letters, surveys, and polls.



To evaluate perception, consider using the quick reference below as a starting point:

Who's Perception?		
➤ Staff Perception	➤ Para-professionals	➤ Parents
➤ Administrators	➤ Student Perception	➤ Guardians
➤ Teachers	➤ Current Students	➤ Neighborhood Residents
➤ Instructional Support Staff	➤ Former Students	➤ Local Business
➤ Clerks/Secretaries	➤ Feeder School Students	➤ Local Churches
➤ Custodians	➤ Parent/Community Perception	

Types of Perceptions	Targets of Perceptions
➤ Views about particular people, events, or situations	➤ Subject areas
➤ Judgements based on attitudes, beliefs, and/or values	➤ Programs and/or innovations
➤ School Climate	➤ Tests, Results, data use
➤ Academic Expectations for students	➤ School leadership, professional climate
	➤ Professional development
	➤ School/parent relationships
	➤ School/community relations

Planning Productive Meetings

An effective Data Coach will plan and meet with the stakeholders of the school on a regular and continuous basis. The configuration of these meetings will vary by audience and need, see **Types of Data Meetings** later in this section. The focus of any particular meeting will be to examine data collection, analysis and dissemination. However, an effective Data Coach will always set aside time to celebrate successes and focus on the positive during these meetings. This next section is dedicated to providing best practices for planning and delivering effective and productive meetings.

Getting Started

The system for examining data can be disconnected at many schools. When staff members are asked to gather data for meetings they often bring anecdotal notes, post-its, spreadsheets, or reports that may be difficult to organize and decipher. Staff may become confused and frustrated when their data collection system does not align with the expectations that the Data Coach may have. In order to fully prepare for an effective data meeting, you need the right data tools. Consider using the following procedures to ensure that participants come prepared with the appropriate information and materials and leave with a plan that is intentional and based on data driven decision-making.

1. Schedule Regular Data Meetings

Cycles may vary. Schedule regular meetings according to type and need. Refer to **“Types of Data Meetings”** later in this section.

2. Be Clear about Meeting Expectations

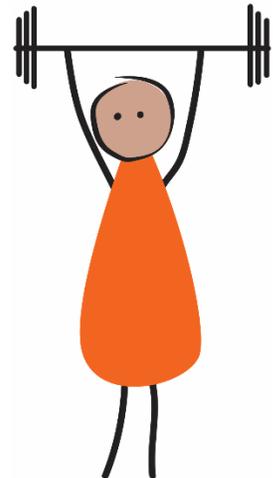
- *Have participants look at the data prior to the meeting*

Meeting participants should set aside time prior to the meeting in order to be prepared to participate in a collaborative conversation. The value of this meeting comes from a focused, supportive conversation that drives actionable plans.

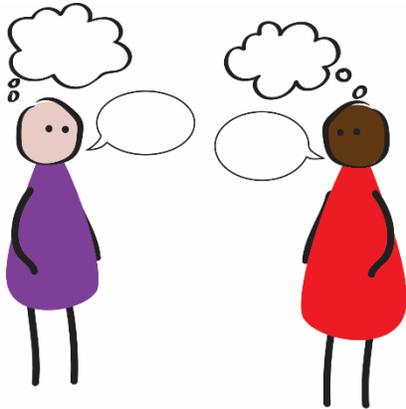
- *Provide participants with a list of meeting requirements*
Provide participants with a comprehensive list of the type of information needed for the meeting, i.e. spreadsheet with class, student name, grade level, gender, ethnicity, type of assessment, scores. An effective data coach will establish data collection parameters according to the type of meeting being planned.
- *Identify necessary material and equipment for participants to bring*
If the meeting requires specific materials such as copies or student samples, be sure that the participants bring enough copies to share. If the meeting requires specific equipment such as iPads, tablets, or laptops, be clear about its purpose and that the meeting could be delayed or postponed without the appropriate equipment present.
- *Encourage participants to bring clarifying questions*
Provide participants with a mechanism to bring probing and clarifying questions to the meeting. This can be accomplished in various ways:
 - ❑ Provide a form or template that can be filled out prior to the meeting.
 - ❑ Provide prompts or reflective questions that may be addressed prior to or during the meeting.
 - ❑ Provide your email as a way for participants to informally communicate.

3. Encourage the Participants to do the Heavy Lifting

Begin the discussion by emphasizing the importance of the participant's role. Establish from the beginning that the Data Coach works as a facilitator, consultant, and mentor. Ensure that the participant recognizes his role of being the "heavy lifter." In other words, the participant should be the gatekeeper of his data. The initiative and willingness to examine the data should come from the participant as well. Although the Data Coach may be the expert in the field, her role is to guide conversations and not control them.



4. Facilitate Collaborative Conversations about Data



Begin by encouraging the use of multiple data analysis strategies. Demonstrate how to leverage dashboards, charts, and other visual indicators as alternatives and/or supplemental analytical tools. Use probing questions to help the participants look at student assessment data in a variety of ways and focus the conversation on what the data is 'saying'. For example, instead of just looking at the overall

mastery of a single assessment item, participants may identify a specific teaching action or lesson taught earlier in the week that may have influenced the outcome.

Finally, work with the participants to form a hypothesis as to what could be the root cause, i.e. low student performance, poor student behavior, or increased student absenteeism. Use this hypothesis to formulate strategies for raising achievement and making course corrections. Examples may include:

- Introducing new or updated instructional techniques
- Engaging intervention strategies
- Re-teaching identified lessons using alternative strategies
- Regrouping students
- Collaborating with other staff
- Connecting with the Parent Liaison, Mental Health Specialist, Truancy Officer

5. Ensure that Participants Leave With an Action Plan

An effective Data Coach helps participants develop an action plan. The Data Coach may choose to develop a template to share or may work collaboratively with the participants to create a functional document. Additionally, the Data Coach may choose to adopt and introduce action plan frameworks from researched based sources, i.e. Danielson Group, the National Center for Education Evaluation and Regional Assistance (NCEE), the Institute of Education Sciences (IES).

When assisting participants in the development of an effective action plan, help them identify both instructional and non-instructional staff who may play a key role in supporting student achievement and success, i.e. Site Administrator(s), Parent Liaison, Mental Health staff, and other school staff. Work together to set timelines, identify deliverables, plan for desired outcomes, and dates for follow-up meetings.

6. Follow Up with Participants' Action Plans

An effective Data Coach will coordinate with Site Administrator(s), SIG Coordinators, and other instructional leaders to determine follow-up protocols. Some sites may choose to designate a team member to follow-up on action plans with participants individually. Other sites may create follow-up schedules and assignments based on grade level, content area, and/or specific unique attributes of the school, i.e. STEM, CTE, etc. Regardless of the follow-up protocol, an action plan should be considered a living document that is continuously reviewed, updated, and modified on a regular basis. It is your role as a Data Coach to establish this understanding when meeting and working with participants.

**Note: Don't wait for the next meeting to check for progress!*

Types of Data Meetings

As mentioned earlier, the configuration of data meetings may vary by audience and need according to individual sites. This section will examine four possible types of data meetings that could be created to align with your site's intervention model and unpacking tool: (a) Data Team Meetings, (b) Grade-level Data Meetings, (c) Content Data Meetings, and (d) One-on-One Data Meetings. Review each to determine which meeting types will align with your goal for developing a data-rich environment:

Data Team Meetings

Data team meetings should focus efforts on developing systems to support implementation of strategies and data-based decision-making in schools. When implemented with fidelity, these systems will help to foster a data-rich culture. Data teams should meet monthly as a best practice. Possible topics may include, but are not limited to, the following:

- Achievement gaps
- Successes and challenges
- Progress monitoring
- Assessment schedules
- Intervention needs
- Parent involvement
- Social and emotional needs
- Resources

Although data team membership will vary from school to school, Site Administrators, SIG Coordinator, Data Coach, Parent Liaison, and a Mental Health representative should always be a part of the core team. Other team members should include teachers, department heads, paraprofessionals, and support staff. Finally, ancillary participants may include student representative(s), parent representative(s), community members, and school board members.

Grade-Level Data Meetings

Grade-level meetings should begin with collaborative conversations that identify grade-specific observations on academic achievement and student success. These meetings should lead to intentional implementation of a data cycle. Review each component of the cycle to assist participants' understanding of how data drives systemic changes to academic achievement and student success:

- Identification of needs
- Research and collection of strategies
- Implementation
- Data collection
- Analysis and refinement

Participants of this team may include teachers, support staff, and site administrators. An effective Data Coach will monitor and provide guidance to the grade-level data team on appropriate meeting cycles. For example, the Data Coach may recommend that grade level data meetings occur regularly every four to six weeks. The data cycle may be based on the time it takes to implement the strategy with fidelity, collect data, and reconvene.

Content Area Data Meetings

Like grade-level data meetings, content area data meetings should begin with collaborative conversations that identify content-specific observations on academic achievement and student success. These meeting should lead to intentional implementation of a data cycle. Review each component of the cycle to assist participants' understanding of how data drives systemic changes to academic achievement and student success:

- Identification of needs
- Research and collection of strategies
- Implementation
- Data collection
- Analysis and refinement

Participants of this team may include teachers, support staff, department heads and site administrators. An effective Data Coach will monitor and

provide guidance to the content area data team on appropriate meeting cycles. For example, an elementary school may require all students grades 3-5 complete three writing prompts per marking period. The Data Coach may recommend that the content area data meeting occurs following each marking period, i.e. every six weeks, every eight weeks, depending upon the marking period cycle. However, at the middle/high school level the data coach may recommend that the math department meet bi-monthly to examine formative assessment data.

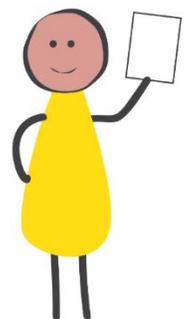
Meeting One-on-One

An effective Data Coach meets regularly with individual teachers at their site. Consistency is key! Make sure to equally support every teacher while promoting a data-driven mindset in every classroom. This ensures that students receive consistent instruction from well-informed teachers.

- Identification of needs
- Research and collection of strategies
- Implementation
- Data collection
- Analysis and refinement

Data Team Agendas

An effective Data Coach creates and shares an agenda well in advance of each meeting. The agenda and directions clearly delineate the date, time, and location of the meeting as well as subjects to be addressed, timelines, work to be done prior to the meeting, resources to bring to the meeting, specific responsibilities of team members, and desired outcomes of the meeting.



Consider using these components to create an agenda template:

- Results from post-assessment
- Strengths and obstacles
- Goals
- Instructional strategies
- Results indicators

Displaying Visually Effective Data

The task of displaying data is the last step in the cycle; collect, analyzed, and disseminate. One method of disseminating data is to display it. However, the effective display of data can only occur when it is intentional, purposeful, visually aesthetic, and independently interpretable. An effective Data Coach will ensure that the visual display of data meets this criteria.

Intentional Display of Data

An effective Data Coach will facilitate discussions about “why” data should be displayed. From this discussion, data selected to display will always be thoughtful and meaningful.

Purposeful Display of Data

An effective Data Coach will facilitate discussions about “how” displayed data will affect student achievement, student success, and/or climate and culture.

Visually Aesthetic Display of Data

An effective Data Coach will consult and mentor participants about the most effective ways to display data in a manner that is not intimidating, that visually catches the eye, and that is legible and comprehensible. Displays that are appropriately located and positioned ensure access, i.e. eye level for students depending upon their age.

Independently Interpretable Display of Data

An effective Data Coach will ensure that displayed is always accompanied by a narrative. Key to ensuring that all viewers have the opportunity to understand the data is to provide interpretations of graphs, tables, and plots. Data is displayed in this manner will ensure that viewers can independently interpret the display.

Avoiding Data Display Pitfalls

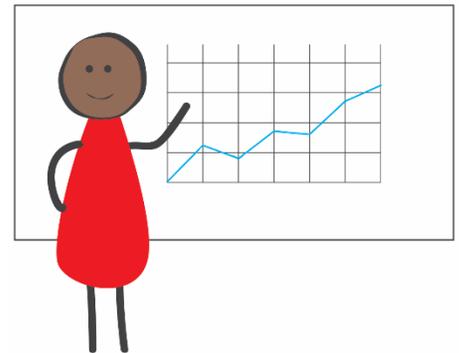
According to Lipton & Wellman (2012), a review of many state and provincial reports reveals several common errors in displaying data. Review these errors listed below to be well-informed and effective as Data Coach:

1. Display data does not illustrate relationships within the data
2. The display range visually skews the values
3. The display uses colors with no or low contrast
4. The display attempts to squeeze too much information into one chart or graph
5. The display labels are difficult to read
6. The display uses graphic effects without purpose

(Lipton & Wellman, 2010, p. 66)

Creating a Data Room

The decision to create a “Data Room” should be the result of multiple collaborative conversations with your leadership at the site. Not all schools have a data room. If a data room is being considered, a best practice is to visit a school to see how the school planned for its creation, who was involved, and what equipment and materials were needed. Additionally, investigate the purpose of the room and its intended use.



Displaying Data for Students, Parents, and Community

An effective Data Coach supports every opportunity to have data displayed throughout classrooms, hallways, and other venues at the school where students, parents, and/or community members can see and understand data on student success and achievement. The Data Coach also emphasizes the importance of having relevant and up-to-date data displayed. This next section provides ideas, rationales, and examples of effectively displaying data. Let’s begin with the basic questions of “Why display data for Students,” and “Why display data for Parents/community?”

Displaying Data for Students

To build a data-rich environment, all stakeholders should have buy-in. Nearly all data will be directly connected students, i.e. achievement, participation, attendance, graduation rates, etc. Students understanding their own learning is not only key but fundamental to building a data-rich culture. An effective Data Coach will provide guidance to teachers and instructional support staff on what type data to display and where to display it. An effective Data Coach will also ensure that the data being displayed is student-friendly and comprehensible. Consider the following:

- Where to display student data?
 - *Student data displays should be visually accessible to students.*
 - *May be located both inside and outside of classrooms.*
- What type of student data could be displayed?
 - *Pre and post test data*
 - *Formative data*
 - *Attendance*
 - *Class and grade level achievement*
 - *Interim assessment data*
 - *Summative assessment data*

***Note:** *Care should be taken to protect individual student identity when displaying student data publicly.*

Displaying Data for Parents and Community

To continue to build a data-rich environment, student data should be displayed for parents, guardians, and caretakers as well for community stakeholders throughout the school. Their understanding and participation in the reform process is key. Displaying data for parents and community fosters awareness of positive and negative trends of school. It can promote participation and collaboration. It serves as a mechanism that invites parents and community to engage in children's education. And finally, it helps to create a common language between teacher-student-parent-community. Review the key questions and ideas below:

- What locations or venues are accessible to parents and community?
 - *External Marquees or bulletin boards*
 - *Bulletin boards near main entrances or front offices*
 - *Newsletters*
 - *Public Television Stations*
 - *Local business that have partnered with the school*

- What type of data is appropriate to display for parents and community?
 - *Pre and post test data*
 - *Formative data*
 - *Attendance*
 - *Class and grade level achievement*
 - *Interim assessment data*
 - *Summative assessment data*

***Note:** When displaying data for parents and community it is important for the Data Coach to be cognizant of the population, their level of understanding, and their ability to interpret the displays. Additionally, be careful to always have updated and current information on display!

Professional Learning Communities (PLCs)

One misconception about the role of the Data Coach is that he is responsible for Professional Learning Communities (PLCs). This section will briefly discuss what PLCs are and how the Data Coach plays an important role in working with PLCs.

What is a Professional Learning Community (PLC)?

According to Dufour, Dufour, Eaker, and Many (2006), a PLC is an “ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve. Professional learning communities operate under the assumption that the key to improved learning for students is continuous job-embedded learning for educators.” (2006, p. 11)

What is the Role of the Data Coach in PLCs?

Within a PLC, a data coach might share data with faculty/teachers. She facilitates data conversations and fosters group interpretation. Her role is to coach the team members to go to the next level of analysis, to “dig deeper.” An effective data coach provides tools for collecting and organizing data. She fosters growth in the development of formative and summative assessment constructions. Sharing results and providing feedback, promoting wins, and celebrating is also a role that an effective data coach assumes.

Reflection

What has been your role in the PLCs at your site?

Participating in Professional Learning

An effective Data Coach is always informed about the work in the field. Gaining perspective from other Data Coaches is critical to your professional

growth. Remember that professional learning is a required component of the reform models. Your professional learning activities should be reflected in the Unpacking Tool and should not be based on last minute decisions. As a Data Coach, there are multiple ways to participate in professional learning. In this section, four professional learning activities will be shared and ways to maximize your experience with each: (a) Workshops, (b) Trainings, (c) Network Meetings, and (d) Conferences. For the purpose of this guide, workshops and trainings are defined as two distinct professional learning activities. Review the definitions provided:

Workshops refer to professional learning where participants are engaged in the process of learning and leaving the session with a work product that can be used or implemented immediately. Key to understanding workshops is the expectation of active participation by participants. Therefore, the role of the presenter is to act as a facilitator.

Trainings refer to a type of professional learning where participants attend sessions to learn a skill(s) and/or to acquire information to be incorporated into practice. Many trainings offer certificates or some type of certification. Therefore, the role of the presenter is to train or guide the learning.

Review this section on participating in professional learning and create a plan of action that will keep you up-to-date and well-informed about resources, practices, and programs that have demonstrated success for students and their families!

Networking Meetings

One requirement of the School Improvement Grant is to participate in SIG Networking Meetings. These meetings are designed to provide a venue where staff can come together and share best practices. Check with your SIG Coordinator to reserve the dates of Networking Meetings planned for this year. This is your opportunity to get to know and connect with other Data Coaches across the state. Consider these suggestions to get the most out of your experience:

- Bring business cards and contact information to share with other Data Coaches.

- Create a notebook so you can collect the contact information of other Data Coaches.
- Invite other Data Coaches to come and visit your school. This school visit could simply be sharing what you are doing or maybe soliciting ideas to incorporate at your site.

Workshops

On and off-site workshops offer an opportunity to actively participate with the facilitator and other participants. To be an effective Data Coach, you must be willing to become actively engaged and not just be an observer. If attending workshops is an opportunity for you to gain professional learning, consider these suggestions to maximize your experience:

- Review the workshop agenda to ensure that the workshop applies to your work.
- Come with a mindset to work collaboratively and to be an active participant.
- When in doubt, ask clarifying questions to better understand how the workshop techniques apply to your setting or practice.
- Set goals to leave the workshop with a number of ideas and practices to apply to your work.
- Get to know someone and invite them to be your workshop buddy.

Trainings

On and off-site trainings offer an opportunity to increase your knowledge and understanding of your practice. To be an effective Data Coach, you must be willing to commit the time that is often required for trainings. If attending trainings is an opportunity for you to gain professional learning, consider these suggestions to maximize your experience:

- Review all documentation about the training. Often times, you are expected to come prepared by reviewing materials or providing information ahead of time.
- Be sure to determine the training schedule. One-day trainings are common but multiple day trainings over time are much more prevalent in the field. If your training spans several days throughout the course of

the year, be sure to secure those dates on your calendar and follow through with the commitment.

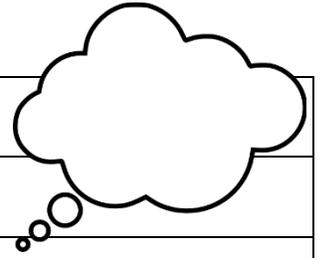
- Be sure to purchase all of the necessary materials required or recommended by the training host. Registration fees do not always include these materials.
- Although SIG funds may not be used to pay for college credit, think about alternative resources or personal financing to earn college credit if the training offers it. Your professional growth can and should extend beyond your current position.

Conferences

While conferences provide multiple opportunities for professional learning and growth, they can sometimes be overwhelming. Most large-scale conferences offer multiple sessions covering multiple topics over several days. They are usually hosted in popular cities or regions and travel is most likely required. All of this can make for a memorable and exhausting experience. If there are conferences that you plan on attending, consider these suggestions to get the most out of your experience:

- Connect with others at your school to accompany you. Consider collaborating with and teaming up other Data Coaches that you know from Networking Meetings.
- Download detailed conference schedules and agendas to review in advance what sessions will be offered. Study the sessions and make selections ahead of time. This will allow you to attend the conference with specific goals in mind.
- **Note: Do not forget to choose alternative sessions as many sessions fill up or are cancelled last minute.*
- If traveling out of town and/or overnight, make arrangements in advance to secure timely travel and lodging that is close to the event.

Professional Learning Reflection



What professional learnings am I interested in attending?

What are my next steps?

What further support/learning will I need?

Using SIG Funds to Support your Work

The last section of the guide provides information on funding your work using school improvement grant monies. Additionally, it will discuss alternative funding sources that may be available to support your work. Begin by conducting a simple needs assessment or inventory check to see what is available to you. Next, review the School Improvement Grant Budget Development Toolkit located on the Michigan Department of Education website to better understand how SIG funds may be used.

Review the Budget Toolkit

This toolkit will provide you with information about purchases that are allowable, reasonable, and connecting to the big ideas of your strategic plan. Your SIG coordinator may ask you to develop your own budget or spending plan. By becoming familiar with and utilizing the budget toolkit, you will be well-informed and prepared to request purchases that will support you in creating a data-rich environment. Review the list of topics below that will most likely reflect the types of purchases you will be requesting. Using the budget toolkit, examine the process and procedure for making purchases of the items listed below. Evaluate each to see how they may connect to your work:

Supplies

The Data Coach position may be new to the school. Purchasing supplies to get you started is a viable use of SIG funds. Think about the types of supplies you may need both short and long term. Consider purchasing professional books on using data, office supplies, chart paper, display boards and any other materials that will assist in supporting a data-rich environment.

Equipment & Technology

The equipment and technology needed to support your work may not be available at your school. Consider securing a desktop or laptop, and a dedicated printer as a part of your work station. Then consider purchasing other equipment to support your data-related activities. These purchases should be acceptable expenditures using SIG funding.

Professional Learning

A major focus of the intervention models is to provide on-going, job-embedded professional learning opportunities. Often times in the planning stages of the grant's budget, this category is heavily emphasized. It is imperative that your professional learning needs are met.

Travel expenses

Finally, remember to consider how much travel will play a part of your daily, weekly, and/or monthly routine. If you are attending regular meetings and/or events off site, you will need to plan for travel expenses such as mileage, hotel, and meals. Again, these are all allowable expenditures using SIG funds.

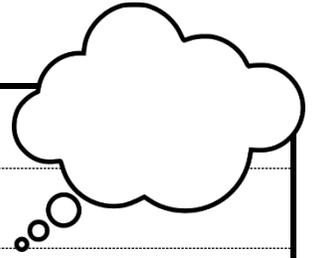
Develop a Spending Plan

By working with your SIG Coordinator and Site Administrator(s), as well as participating on the Leadership Team, you will have the needed support to develop a spending plan or budget that will support creating a data-rich environment. The first step in this process is to be an active participant and contributor to the Unpacking Tool process. Every purchase must be meaningful and connect to your overall goals. Your spending plan format should be created to meet your needs. Develop a comprehensive plan to avoid last minute requests that could be denied. Refer to the budget toolkit to ensure that your spending plan stays within the require guidelines for using SIG dollars.

Locate Other Funding Sources

Multiple funding sources may be used to support your work. Working closely with your SIG Coordinator and Site Administrator(s), you will be able to determine what those sources are and how they can be used. Identifying these sources early on will be key to developing a viable sustainability plan. Your work and efforts should not terminate with the grant. On the contrary, the work you do should serve as a springboard to developing and implementing an effective data-rich environment and culture that will last far beyond the life of the grant. By locating and transitioning your work to alternate funding sources when possible, you begin to guarantee the sustainability of your work.

My Reflections



What are the key messages from me from this section?

What are my next steps?

What further support/learning will I need?

Resources

This section of the guide is designed to provide you with several resources that may be used in promoting data-rich thinking and creating data-rich cultures within your school communities.

Guiding Questions:

When collecting the four types of data, consider using the guiding or key questions listed here. These questions are designed to promote deep and intentional thinking about data collection, analysis, and dissemination. Add to the list as needed. Use these questions to generate conversations during meetings, PLCs, or any other venue related to data dialogues.

Sample Data Meeting Protocol:

Use the sample protocol to organize effective and meaningful data dialogues and data meetings. Preparation and organization are key to hosting successful meetings. The sample protocol is designed as a framework. Be encouraged to use and align the sample to your particular needs and context.

Graphic Displays of Data:

An effective Data Coach will ensure that visual representation of data is clear and concise. Consider using the samples of each type of graphic display or creating similar documents or resources that are accessible and functional.

Guiding Questions

Guiding Questions for Collecting Achievement Data

- What evidence can we collect about our students' learning?
- What evidence do we have that shows the knowledge, skills, and understandings our students have achieved?
- Which data indicate the degree to which our students show the conceptual understandings and generalizations in our common core standards?
- What evidence shows which students are meeting or exceeding our achievement expectations and which are not?
- What do we know about how each individual student learns?

Guiding Questions for Collecting Demographic Data

- Who are our students?
- What trends do we see in our population?
- What factors outside the school may help us understand our population inside the school?

Guiding Questions for Collecting Process Data (Bernhardt, 2004, p. 137)

- What do teachers want students to know and be able to do?
- How are teachers enabling students to learn in terms of—
 - Instructional strategies
 - Learning strategies
 - Instructional time
 - Instructional location
 - Student-teacher ratio
 - Organization of instructional components
 - Assessment
 - Philosophies and strategies of classroom management
 - Personal relationships, among student, and among students and teachers
- How will teachers know if any given approach helps all students learn what they want them to learn?

- What will teachers do with the students who do not learn this way?
- What is the responsibility of all members of the school staff?
- What is the job of each member of the school staff?
- Who will all parts of the curriculum relate?
- What learning strategies do successful learners use?
- What learning strategies have “unsuccessful” learners used in the past, successfully, that could be used again?

Guiding Questions for Collecting Perception Data

- How do members of our school community feel about our school and district?
- How satisfied are school community members about our educational programs?
- What do members of our school community perceive to be the strengths and needs in our school?
- What do members of our school community think about the skills of our graduates?

Sample: Data Meeting Format

Step 1: Collect & Chart Data

Team meeting examines pre-assessment data prior to focus teaching. Teachers must come prepared for the 60–90 minute meeting complete with the following:

- Student papers
- Scoring guide or measurement scale
- Papers arranged from most proficient to least proficient
- Ideas about students who are proficient and higher (strengths)
- Ideas about students who are not proficient (obstacles, misconceptions?)

Step 2: Analyze Strengths and Obstacles

Examine student work that is proficient and higher. Consider the following:

- Strengths
 - Consistent skills
 - Commonalities
 - Strategies and best practices
- Weaknesses
 - Inconsistent skills
 - Trends, patterns of failure
 - Misconceptions about problem-solving processes
 - Issues related to certain subgroups, such as ELL, gender, ethnicity
 - Students consistently rated not proficient

Step 3: Establish Goals: Set, Review, Revise

Ask Questions:

- What are the ramifications if the goal is changed to reflect a higher or lower outcome?
- Is the goal still relevant and necessary?
- Is this skill still considered important?
- Are there other urgent needs to focus on?

- Is it possible to reset the goal higher? If so, is it achievable?
- Is the time frame too short, just right, or too long?
- Which students are consistently not proficient?

Step 4: Select Instructional Strategies

Brainstorm and discuss possible strategies. Consider using this process:

1. Team members brainstorm and examine effective teaching strategies and techniques (experience- and research-based) and determine which techniques, when implemented appropriately, will have the desired outcome.
2. Refer to the list of effective teaching techniques, to be selected from on the basis of meeting specific objectives related to student understanding of concepts and application of skills.
3. Analyze each possible or suggested strategy in terms of impact on student learning.
4. Consider what other teachers are implementing to cause a high degree of success; replicate effective practices.
5. Only select strategies that teachers are responsible for.
6. Avoid considering strategies outside your sphere of influence or immediate accountability, such as "Parent needs to become more involved" or "Students will be enrolled in afterschool program."
7. Have team members collaborate on choosing the one or two strategies that they all agree to implement during the next teaching period.
8. Mark the chosen strategies with an X and give team members copies of those strategies.
9. Model all strategies that the team has agreed upon. So that the task of modeling does not always fall to the Data Coach, ask other team members to demonstrate a particular strategy. What will the teacher do as he or she uses this strategy?

Step 5: Determine Results Indicators

When establishing the results indicators for the chosen strategies, keep in mind:

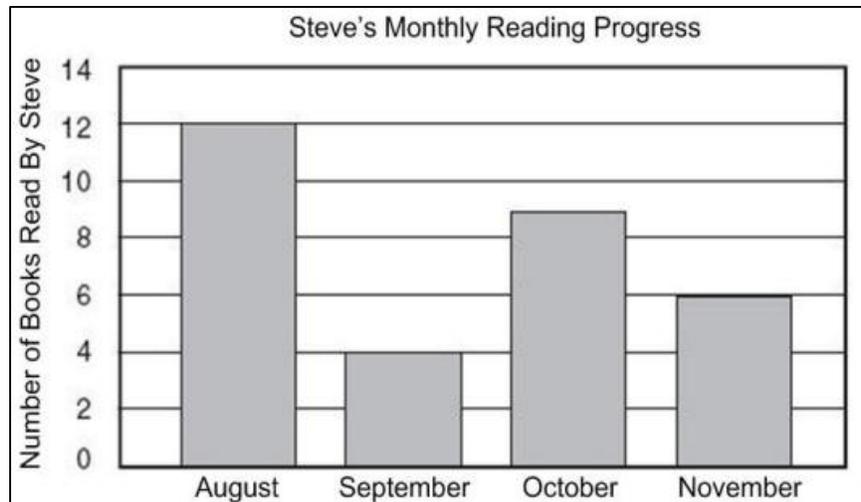
1. Whether the strategy is actually being implemented.
2. If the strategy is having the intended impact on student learning and improved performance.

Visual Data Display Graphic Formats

(Adapted from Lipton & Wellman, 2010)

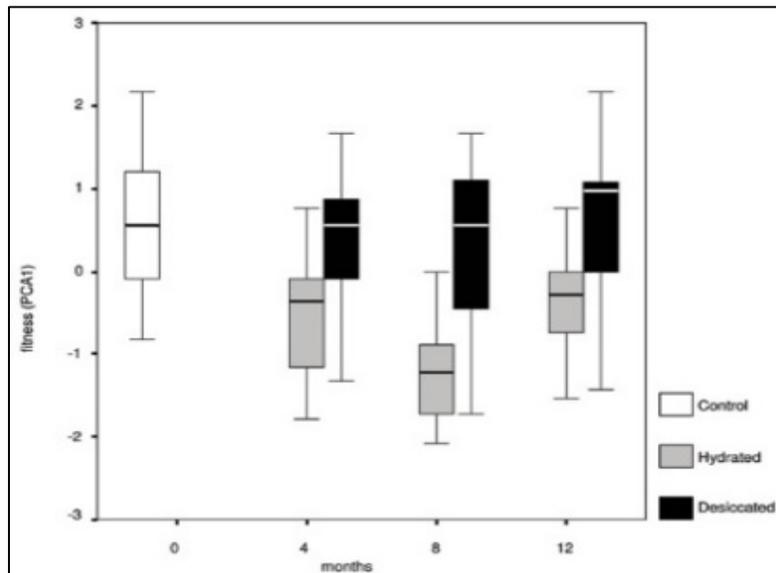
Bar Graphs

“Bar graphs can be used to display comparisons, rankings, and change over time, for example, performance in two content areas or performance by subgroup or proficiency levels.” Lipton & Wellman, 2010, p. 67



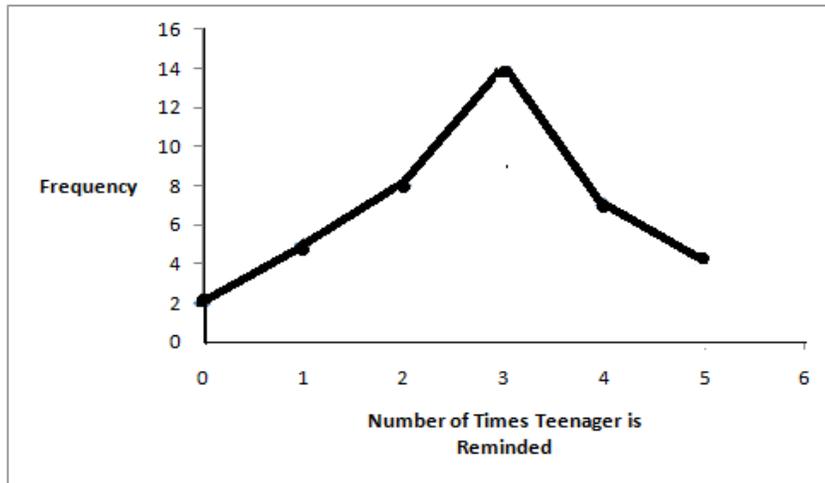
Box and Whisker Plots

“Box and whisker plots turn raw data into the “shape” of the score distribution, such as standardized test scores, for ease of visual interpretation. The boxes display the distribution of scores, while the whiskers indicate the range above and below the median.” Lipton & Wellman, 2010, p. 67



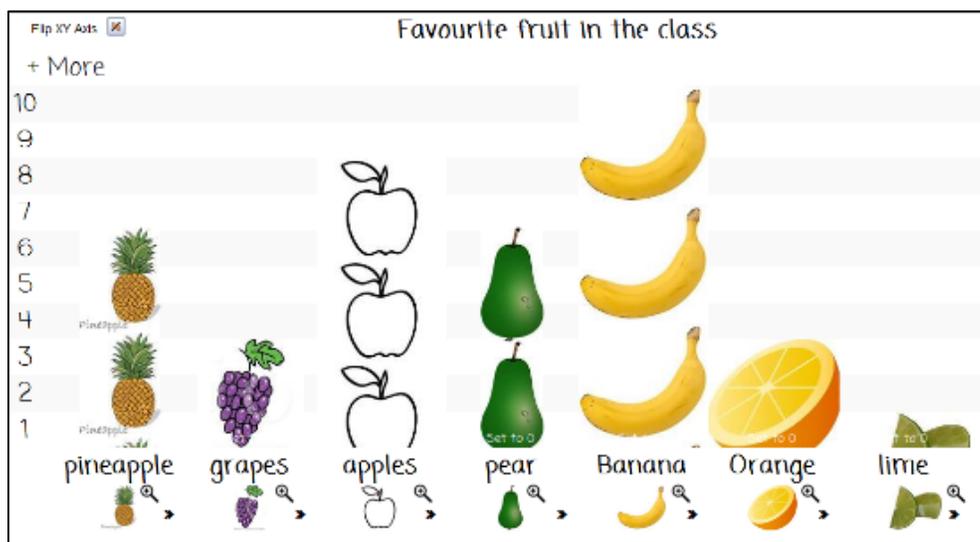
Line Graphs

“Line graphs display a sloping line or segments of lines, representing changes over time. Thus, they are particularly useful for displaying trends, such as reading scores over a period of years. Line graphs can also display comparisons when several lines are used on the same graph, such as reading scores for several schools or several grade levels over several years.” Lipton & Wellman, 2010, p. 67



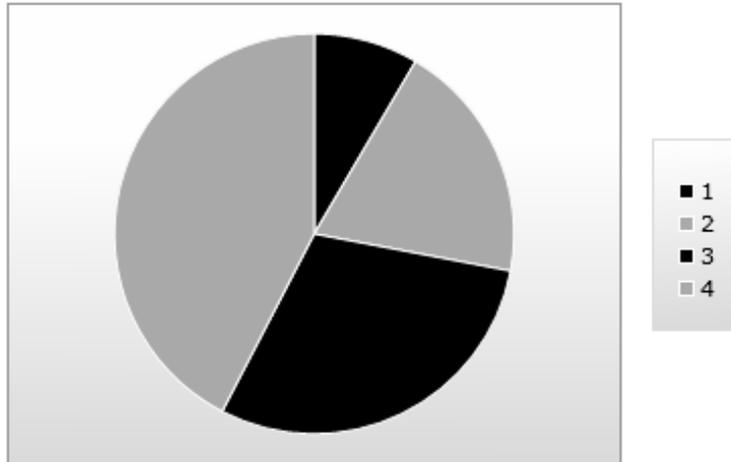
Pictographs

“Representing data as pictures makes a creative and eye-catching variation from the more commonly used graphic elements. For example, pictographs can replace the icons on a line graph or can be stacked to form the bars in any form of a bar graph.” Lipton & Wellman, 2010, p. 67



Pie Charts

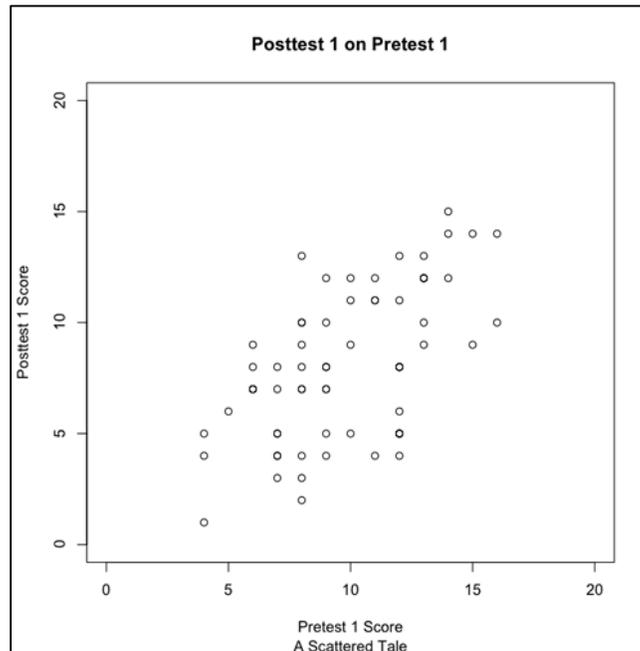
"Pie charts display parts of the whole. The size of each part displayed as a percentage makes the relationship among the parts and between the part and whole graphically apparent to observers. For example, pie charts can be used for demographic data, such as teacher' years of experince or students' socioeconomic status." Lipton & Wellman, 2010, p. 67



Scatter Plots

"Scatter plots display relationships between two or more variables. They indicate correctations and comparisons, at one pooint in time or over time, such as scores in reading comprehension and math problem solving."

Lipton & Wellman, 2010, p. 67



Tables

“Tables show exact numerical values, such as scores for each student in a class. They are used to portray simple data sets that compare related values, such as scores by teacher by year. Tables are also effective for displaying quantitative information involving more than one unit of measure, such as subtends by age by performance quartile.” Lipton & Wellman, 2010, p. 67

Color Mixing - color wheel colors in colored pencil

	Yellow	Yellow Orange	Orange	Red Orange	Red	Red Violet	Violet	Blue Violet	Blue	Blue Green	Green	Yellow Green
Yellow												
Yellow Orange												
Orange												
Red Orange												
Red												
Red Violet												
Violet												
Blue Violet												
Blue												
Blue Green												
Green												
Yellow Green												

Conclusion

This guide has been developed in an effort to provide a consistent message with useful and applicable content. Use this information to guide your work as you become and/or continue to be an effective Data Coach. Share your ideas with others in the field and seek out new ideas from your colleagues. Remember the ultimate goal of your work is to increase student achievement and student success. By working to create a data-rich environment, culture and mindset, you will ensure the opportunities for achievement and success for each and every student.

"You can have data without information, but you cannot have information without data."

Daniel Keys Moran

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