Getting Started

Data Use Professional Development Series
Rhode Island Department of Education

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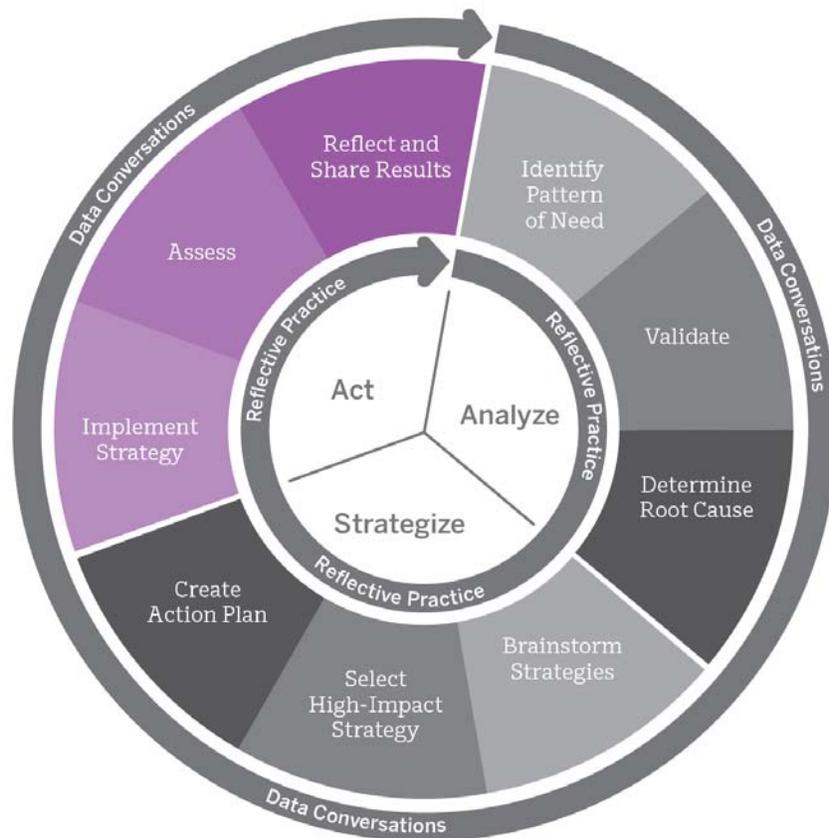
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Table of Contents

Introducing the Initiative

Data-informed decision-making leads to better instructional practice and, subsequently, greater student achievement. This idea is supported by Rhode Island's Basic Education Program (BEP), which states, "each LEA shall develop school and district level data-based, decision-making teams. These teams shall review comprehensive assessment data to develop, evaluate and modify academic instruction and support services." (BEP, G-14-1.1) To this end, the **Data Use Professional Development Series** will help foster a transparent, collaborative data culture in each building through Cycles of Inquiry and frequent Data Conversations.

Upon completion of the Data Use Professional Development Series, educators will be able to:

- Collect, access, and analyze a variety of student data to improve instruction, drive academic achievement outcomes for students, evaluate curriculum and instruction, and provide appropriate interventions.
- Incorporate data analysis into regular instructional planning both independently and collaboratively.
- Use both aggregated and disaggregated data appropriately for analyzing academic achievement at a student, classroom, school, district, and state level.

You have been selected as a member of your school's School Data Leadership Team (SDLT) in the upcoming school year. As a member of the SDLT, you will play an important role in your school's adoption of this work. Upon completion of the Data Use Professional Development Series, you will:

- Understand the necessary resources (including time, structures, guidance, and materials) for educators to collaborate and analyze data.
- Lead by example, embracing the use of data as a tool for improving instruction and achievement.
- Incorporate data use into the day-to-day culture of the school.

As we start the school year, it is crucial to communicate clearly to educators about the initiative. Copy the following statements from your PD session Participant Notebook, and share with educators when introducing the initiative.

At the end of this school year…

_____

_____

Vision statement…

_____

_____

Why use data?

_____

_____

The Cycle of Inquiry
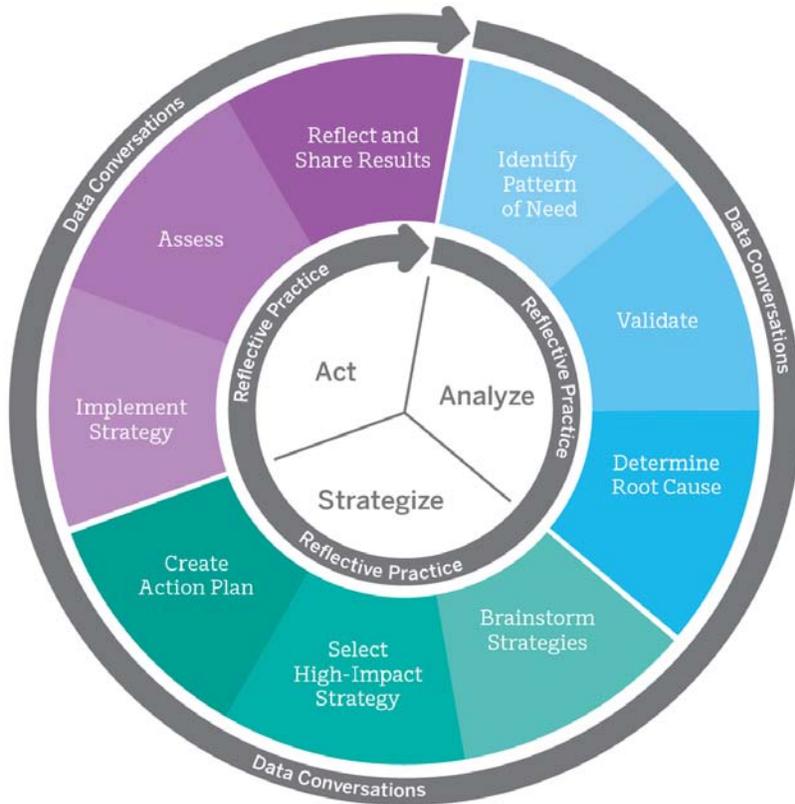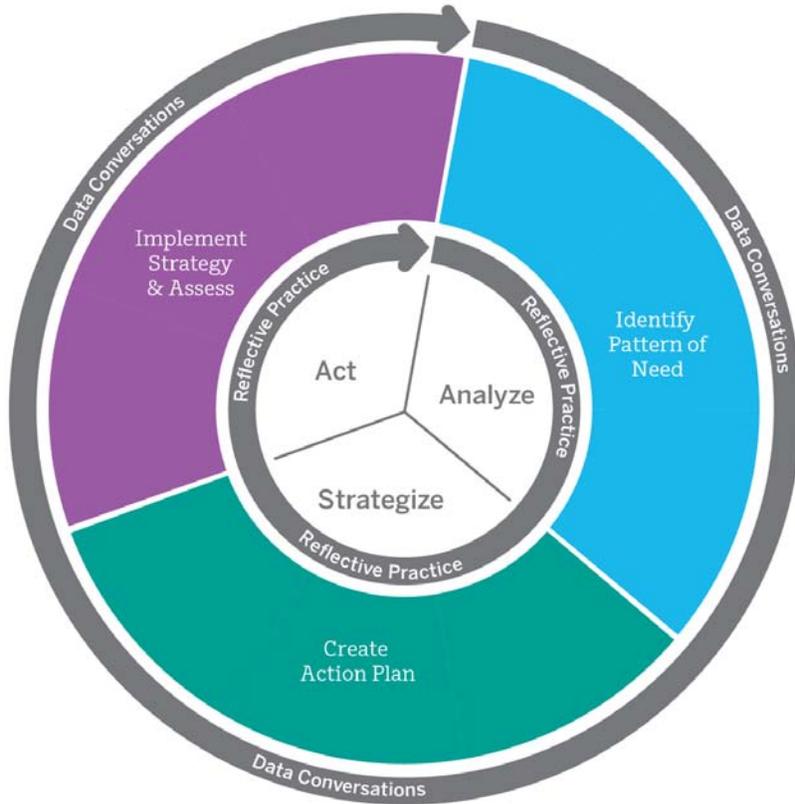
Data Inventory

Overview

Educators consistently use data to make decisions and adjust instruction. As we develop this school-wide data culture, we should start looking at the data we have and the data we use.

The term "Data Inventory" suggests a list of data. It is useful to list the pieces of information we have and who uses them. We will continue to work on our Data Inventory over the course of the year. It's not something done once then filed away; it's built upon, returned to, and used in different ways. Working on a Data Inventory over time uncovers gaps, overlaps, redundancies, or pieces of data that are not useful.

The exercises in this section guide educators through a first-level data inventory listing data sources on the Data Inventory Template. This initial list is not an exhaustive record of all available data sources, but rather a living, evolving document we will add to, revise, and analyze.

Objectives

By the end of this set of exercises, educators will be able to:

- Define data.

- Identify a variety of data sources available in their school.

- Describe the purpose of conducting a Data Inventory.

- Differentiate between quantitative and qualitative data.

Vocabulary

Data: Any artifact that provides information about a student or a group of students, qualitatively or quantitatively

Data Inventory: A comprehensive list of available sources of data sources that describes each source's purpose, accessibility, use, and schedule.

Qualitative Data: Data that describe or explain with words (e.g., observations, conference notes).

Quantitative Data: Data measured and reported as numbers (e.g., student test scores, attendance, age).

Opening Discussion

Discuss the following before starting the first exercise in order to unpack educators' basic understanding of data.

Listen For…

Consider jumping to Exercise 2 if you hear:

- "Data are any type of information that can be measured; it could be test scores but also observations or anecdotal notes."
- "It could also be attendance, notes on student behavior, exit tickets."

Consider starting with Exercise 1 if you hear:

- "Data are numbers you get from state tests."
- "Tests and quizzes are the sources of

1. Ask educators to think about the first week of school and describe the two or three most important pieces of information they need to plan their instruction for the first month of school.

2. Ask educators to think ahead to the end of the first quarter of the school year and share what information they use to guide their instruction for the remainder of the school year.

3. Discuss how all of this "information" is really data. How might they define "data?"

Exercise 1.1: Classifying Data Sources

Purpose:

Prompt educators to categorize a variety of common data sources.

Objectives:

Upon completion of this exercise, educators will be able to:

- Sort and list a wide range of data sources.

Materials Needed (for each educator):

- *Categories of Data* handout

- *Exercise 1.1 Reflections* handout

Time:

Approximately 10 minutes

Instructions:

1. Give each educator the *Categories of Data* handout.

2. Ask educators to read the descriptions of categories of data and then answer any questions it prompts.

3. Ask educators to read the list of data and check the appropriate column for the category of that data. Remind them that some data can belong to more than one category.

4. Suggest educators add their own ideas for data and note their categories.

5. Ask educators to share any data sources they added.

Reflection:

1. When the discussion concludes, ask each educator to complete the *Exercise 1.1 Reflections* handout.

2. Record the results of the *Exercise 1.1 Reflections* in the *Data Use Professional Development Series Log.*

Categories of Data

Handout

Instructions: Place an X in the column to mark the correct data category.

Student Achievement Data: Measures/evaluates student achievement.

Demographic Data: Describes the student population.

Student Engagement Data: Tracks student participation and attendance habits.

Curriculum, Instruction, and Program Data: Focuses on the instructional environment.

	Student Achievement	Demographic	Student Engagement/ Perception	Curriculum, Instruction, Programs
SAT Scores				
Teaching strategies				
Report card grades				
Student attendance				
Student address				
Student's transfer status				
Lesson plans				
Diagnostic/screening test results				
Student perception of school				
Parent phone numbers				
Tardy records				
Scope and sequence of instruction				
Common Core Standards				
Essay written by student				
Student involvement in clubs				
Language spoken at home				

Answer Guide

Categories of Data Worksheet

	Student Achievement	Demographic	Student Engagement/ Perception	Curriculum, Instruction, Programs
SAT Scores	X			
Teaching strategies				X
Report card grades	X			
Student attendance			X	
Student address		X		
Student's transfer status		X		
Lesson plans				X
Diagnostic/screening test results	X			
Student perception of school			X	
Parent phone numbers		X		
Tardy records			X	
Scope and sequence of instruction				X
Common Core Standards				X
Essay written by student	X			
Student involvement in clubs			X	
Language spoken at home		X		

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Exercise 1.1 Reflections

Describe any types of student data that you had not considered before.

Rate your ability to list a wide variety of data sources.

Cannot do it	Can do it with significant support	Can do it with some support	Can do it independently
1	2	3	4

Information I still need or want to pursue further:

Exercise 1.2: List and Categorize Data Sources

Purpose:

Through a collaborative process, educators will be made aware of the data sources available in their school.

Objectives:

Upon completion of this exercise, educators will be able to:

- Identify a variety of data sources in their school.

- Place available data sources into categories.

Materials Needed (for each educator):

- Packet of sticky notes in three different colors

- *Exercise 1.2 Reflections* handout

Time:

> **Notes to Facilitator:**
> 1. For groups larger than eight, break educators into smaller working groups (by content area, grade level, etc.). Each group should only contain four or five people to encourage everyone's active participation.
> 2.   Save educators' sticky notes to use in Exercise 1.3. If educators worked in small groups, keep each group's sticky notes together.

Approximately 30 minutes

Instructions:

1. Give each educator the same color sticky notes.

2. Ask educators to use sticky notes to write down all the data sources that they <u>regularly use</u> (one source per sticky note).

3. Hand out second color of sticky notes. Ask educators to write on these notes data sources that they <u>use occasionally</u>, one source per sticky note. It may be helpful to give examples such as attendance data, curriculum data, etc.

4. Hand out third color of sticky notes. Asks educators to write other data sources they are aware of but <u>do not use</u> — one source per sticky note. It may be helpful to give examples such as demographic data, extra-curricular activity involvement, etc.

5. If educators are working in small groups, have each group place their sticky notes together in the middle of the table or a nearby wall. If working as a whole group, have educators place their sticky notes on a wall in a central location for all to see.

6. After all data source ideas are exhausted, ask educators to sort the sticky notes into categories (e.g., student achievement, demographic, student engagement, etc.). If Exercise 1.1 was skipped, the facilitator could challenge the team(s) to create the categories (time permitting) or give them the categories in the *Data Inventory Template*.

Reflection:

1. When the discussion concludes, ask each educator to take a few minutes to complete the *Exercise 1.2 Reflections* handout.

2. Record the results of the *Exercise 1.2 Reflections* in the *Data Use Professional Development Series Log.*

Exercise 1.2 Reflections

Describe a data source you hadn't consistently used before that you might consider using.

Rate your ability to include a variety of data sources in your instructional decisions.

Cannot do it	Can do it with significant support	Can do it with some support	Can do it independently
1	2	3	4

Information I still need or want to pursue further:

Exercise 1.3: Data Inventory Template

Purpose:

Educators will consolidate the data sources they identified in the previous exercises onto one document.

Objectives:

Upon completion of this exercise, educators will be able to:

- Describe the benefits of maintaining a current Data Inventory.

Materials Needed (for each educator):

- *Data Inventory Template*
- Sticky notes of data sources completed in Exercise 1.2
- *Exercise 1.3 Reflections* handout

Time:

Approximately 15 minutes

Notes to Facilitator:
1. Use the sticky notes educators created in Exercise 1.2.
2. If educators worked in small groups for Exercise 1.2, use the same groups for this exercise. To encourage all educators to be actively involved in the exercise, each group should have no more than 4 or 5 people.

Instructions:

1. If the sticky notes from Exercise 1.2 are no longer on display, lay out the sticky notes (keep each group's sticky notes together).

2. Provide each person one page from the *Data Inventory Template*. For educators working in small groups, give each group a set of the *Data Inventory Template* and each educator in the group one page of the *Data Inventory Template*.

3. Ask educators to select/locate the sticky notes that belong in the category of their page of the *Data Inventory Template*.

4. Ask educators to copy the data sources from the sticky notes onto the first column of one of the five pages of the *Data Inventory Template* — Student Achievement Data, Demographic Data, etc. Educators should choose the best category for the data source, understanding that some data may fit into one or more categories.

5. After copying data sources onto the appropriate *Data Inventory Template*, ask educators to work together to complete the <u>second and third columns on the Student Achievement</u> page of the *Data Inventory Template*. They will only complete the <u>first column on the remaining sheets</u>. Point out that educators will complete the other columns on all the sheets during future sessions.

6. Ask educators to comment on the patterns that emerge from the Data Inventory. Responses may include:
   - *Student Achievement Data page has the most entries*
   - *Data sources listed on some pages may not be used frequently*
   - *Data sources on some pages may be hard to access*

7. Discuss with educators how Data Inventory can be helpful. Responses may include:
   - *Way to have an organized list of all the data sources available*
   - *Remind us of the variety of data sources available*

Reflection:

1. When the discussion concludes, ask each educator to complete the *Exercise 1.3 Reflections* handout.

2. Record the results of the *Exercise 1.3 Reflections* in the *Data Use Professional Development Series Log*.

Data Inventory Template

Student Achievement Data

Data Source	Grade Range	Content Area	When data collected / received	Who has access/ Where it is stored	Purpose	How are data currently used?	How data could be used more effectively
Example: NECAP	*3,4,5,6,7, 8,11*	*Reading, Math*			☐ Inform Instruction ☐ Screen/Identify ☐ Outcomes/ Accountability		
					☐ Inform Instruction ☐ Screen/Identify ☐ Outcomes/ Accountability		
					☐ Inform Instruction ☐ Screen/Identify ☐ Outcomes/ Accountability		

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Data Inventory Template

Demographic Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
Example: *Transfer records*				

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Data Inventory Template

Student Engagement/Perception Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
Attendance				

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Data Inventory Template

Curriculum, Instruction, and Program Data

Data Source	When data collected	Who has access/ Where it is stored	How data are currently being used	How data could be used more effectively
Lesson plans				

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Data Inventory Template

Other

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Exercise 1.3 Reflections

Describe the benefit(s), in your opinion, of maintaining a current Data Inventory.

Rate your ability to continually maintain a Data Inventory.

Cannot do it	Can do it with significant support	Can do it with some support	Can do it independently
1	2	3	4

Information I still need or want to pursue further:

Exercise 1.4: Broadening Definition of Data to Include Qualitative Data

Purpose:

Educators will define and identify qualitative and quantitative data that can be used to guide instructional practice.

Objectives:

Upon completion of this exercise, educators will be able to:

- Differentiate between quantitative and qualitative data.
- Identify qualitative data that can add value to data-informed decision making.

Materials Needed (for each educator):

- *Quantitative vs. Qualitative* handout
- Sets of the *Quantitative and Qualitative Data Example Cards* cut along the dotted lines (keep each set together)
- Two differently colored highlighters for each group/pair
- *Exercise 1.4 Reflections* handout

Time:

Approximately 20 minutes

Instructions:

1. Divide educators into groups/pairs.
2. Distribute one *Quantitative vs. Qualitative* handout to each group.
3. Review the definitions of quantitative and qualitative data.
4. Ask educators to describe one source of quantitative and one source of qualitative data.
5. Distribute one set of *Quantitative and Qualitative Example Cards* to each group.
6. Ask educators to differentiate between the examples of quantitative and qualitative data by placing the cards in the appropriate section of the *Quantitative vs. Qualitative* handout.

7. If one group finishes before the other(s), encourage them to jot down their own examples of qualitative data.

8. When groups finish matching, answer any questions they have or discuss alternative sources of data they identified.

9. Give each group two differently colored highlighters and designate one color to signify quantitative data and the other to signify qualitative data.

10. Divide educators into groups and ask them to use the *Data Inventory Template* they completed in the previous exercise. Ask educators to place an appropriate colored dot next to the sources they identify as qualitative or quantitative.

11. Ask each group to comment on the number of quantitative and qualitative data sources on their page. Are there equal numbers of each type or is one type more common?

12. Discuss with the group any patterns across the different pages of the *Data Inventory Template*.

    Responses may include:
    - *All pages had a balance of quantitative vs. qualitative*
    - *All pages had more of one type of data than another*

13. Discuss how to integrate quantitative and qualitative data to inform instructional practice.

    Response may include:
    - *Quantitative data tends to be readily available and can help identify patterns*
    - *Qualitative data can provide more depth of information about a pattern*

Reflection:

1. When the discussion concludes, ask each educator to complete the *Exercise 1.4 Reflections* handout.

2. Record the results of the *Exercise 1.4 Reflections* in *the Data Use Professional Development Series Log.*

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Quantitative vs. Qualitative

Handout

Quantitative Data	Qualitative Data
Data measured and reported as numbers	Data that describe or explain with words
(e.g., student test scores, attendance, age)	(e.g., observations, conference notes)

Quantitative and Qualitative Example Cards

SAT Scores	Notes from conference with parent/student
Email from parent	NECAP results
Essay written by student	Recommendation from guidance counselor
Diagnostic testing results	End of year exam scores
Teacher's written observations	Attendance record
Parent letter/note	Reading percentile
Final exam scores	Student journal entry
Recommendation for behavior referral	End of unit test scores
Tardy records	Percentage of students with Free/Reduced lunch
Lesson plans	Teaching strategies

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Exercise 1.4: Answer Guide

Quantitative and Qualitative Example Cards

Quantitative	Qualitative
SAT Scores	Notes from conference with parent/student
NECAP results	Email from parent
Diagnostic testing results	Recommendation from guidance counselor
End of year exam scores	Essay written by student
Attendance record	Teacher's written observations
Final exam scores	Student journal entry
Reading percentile	Recommendation for behavior referral
Tardy records	Lesson plans
End of unit test scores	Teaching strategies
Percentage of students with Free/Reduced lunch	Parent letter/note

Exercise 1.4 Reflections

Describe an example of how you will use both qualitative and quantitative data to inform a decision about your instruction.

Rate your ability to identify qualitative data that can add value to data-informed decision making.

Cannot do it	Can do it with significant support	Can do it with some support	Can do it independently
1	2	3	4

Information I still need or would like to pursue further:

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Resources

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