

Using Data Decision Making for System Change

Initial Questions to Think About

1. What is the purpose of your school?
2. What is the purpose for collecting data at your school?
3. How do you want to use the data that will be collected?
4. What are the barriers (i.e. people, products, reasons) to collecting data at your school?
5. What are the barriers to analyzing data at your school?
6. How can you eliminate the barriers so data can be used on a systemic and continuous basis?

More Questions...

1. At what "stage" is my school/district in the development and use of DBDM?
 - a. We haven't started DBDM yet
 - b. We are starting DBDM processes
 - c. I feel we are moving well in the right direction
 - d. We are advanced data based decision makers
2. If we are below advanced, what can we do to move to the next stage?
3. What are driving and restraining forces (force field analysis)?
4. How comfortable am I personally in using data?
 - a. Not comfortable
 - b. Mildly comfortable
 - c. I am generally comfortable using data
 - d. I am a data use expert
5. How can I advance to the next data comfort stage if I am not an expert/very comfortable right now?

Getting Additional Data: Thought Joggers

Consider the following general questions as you prepare to further define your red flag.

1 Write the answers down, and make sure everyone on the team agrees.

- Who will use the additional data we collect? Who needs to know the results of any analyses?
- What kinds of data are still needed? What resources are available to collect and analyze the data?
- When do we collect the data? When is the information needed?
- Where can we find the data?
- Why is this data not currently available?
- How is the information to be used after the data have been analyzed?

Source: Adapted from Patton, 1987, page 9.

Consider the data you need related to student learning, particularly if you need to
2 disaggregate data and if you need to combine different types of data. To collect additional data on student learning, try looking at school records that document student learning over time.

- | | |
|--|--|
| <input type="checkbox"/> standardized tests | <input type="checkbox"/> performance assessments |
| <input type="checkbox"/> standards-based assessments | <input type="checkbox"/> authentic assessments |
| <input type="checkbox"/> norm-referenced tests, diagnostic tests | <input type="checkbox"/> teacher-made tests |
| <input type="checkbox"/> criterion-referenced measures | <input type="checkbox"/> teacher-assigned grades |
| | <input type="checkbox"/> other: |

Consider collecting data on school processes and relating them to student learning in order
3 to test your hypotheses. To help collect additional data on school processes, use a flow chart or other graphic organizer to visualize procedures and major steps in the process.

- | | |
|---|--|
| <input type="checkbox"/> instructional strategies | <input type="checkbox"/> assessment |
| <input type="checkbox"/> learning strategies | <input type="checkbox"/> classroom management |
| <input type="checkbox"/> instructional time | <input type="checkbox"/> discipline strategies |
| <input type="checkbox"/> scheduling | <input type="checkbox"/> class size |
| <input type="checkbox"/> instructional location | <input type="checkbox"/> student groupings |
| <input type="checkbox"/> student-teacher ratio | <input type="checkbox"/> enrollment in courses, programs |
| <input type="checkbox"/> student work | <input type="checkbox"/> policies and procedures |
| <input type="checkbox"/> professional development | <input type="checkbox"/> teacher assignments, placements |
| <input type="checkbox"/> leadership | <input type="checkbox"/> classroom practices |
| <input type="checkbox"/> technology | <input type="checkbox"/> extracurricular programs |
| <input type="checkbox"/> partnerships | <input type="checkbox"/> other: |

Consider additional measures of demographics. To collect additional data on demographics,
4 try looking at data on teacher quality, such as by teachers' gender, ethnicity, number of years teaching experience, licensure and credentials, turnover, attendance and professional development. Collect additional and relevant community information such as population trends, community resources, business partnerships, community involvement in the schools. Additional parent information you may want to collect includes involvement in child's learning, home language, educational levels and employment.

- enrollment
- attendance
- drop-out rate
- retention rate
- graduation rate
- promotion rate
- ethnicity
- gender
- grade level
- mobility
- free/reduced lunch
- language fluency
- program participation
- concurrent enrollment participation
- discipline indicators
- safety
- other:

DBDM Process

1. What is the issue at hand?	
2. What is the ideal condition?	
3. What is the present condition?	
4. What is the gap?	
5. Is this a priority issue?	
6. Develop an “ends-focused” goal statement.	
7. Search for the root cause.	
8. Select strategies for improvement	
9. Action Plan	
10. Monitor and evaluate	

Data Teams

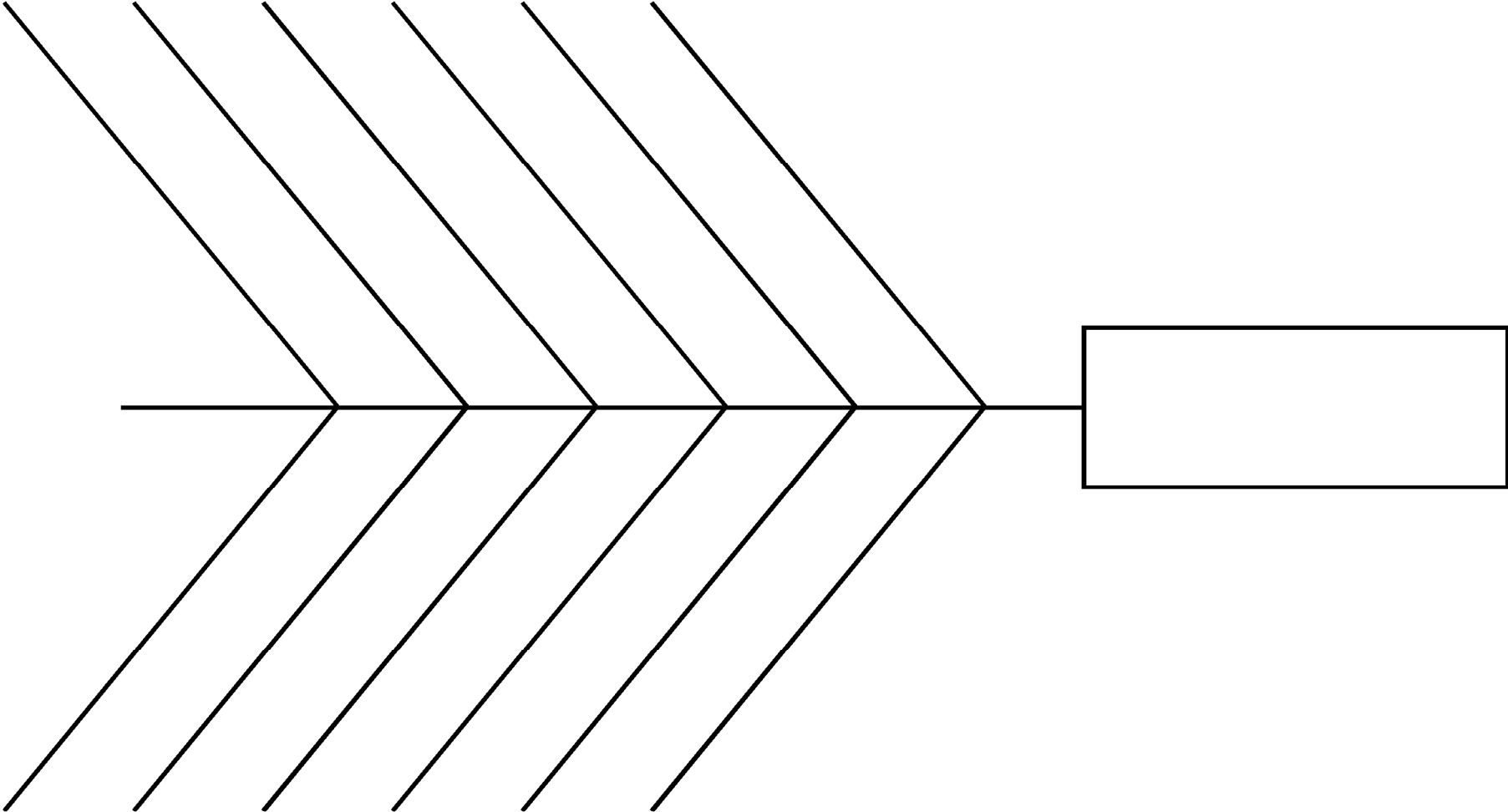
- Data Teams adhere to continuous improvement cycles, examine patterns and trends, and establish specific timelines, roles, and responsibilities to facilitate analysis that results in action. (S. White, *Beyond the Numbers*, 2005, p. 18)
- Be transparent, clear, and organized – follow a stated model and provide overt definitions, explanations, and rationales
- Considerations:
 - What teams do you need?
 - Who can be on the teams?

- How will these be structured?
- Time to implement
- Training on process
- Grade level/content planning time; faculty meetings
- Follow-through: what's the accountability process?
- Assessing action plan – continual monitoring, feedback, revisions, evaluation
- Provide appropriate on-going PD on data as needed
- Data leaders work with specific team to guide through process
- Supervisor (coordinator, principal, etc...) should meet with data leaders on a *regular, scheduled basis*

Data Audit

- Find out the DBDM processes, conceptual understandings, applications, and other components of effective data usage to make decisions
- What does your staff know and not know?
- What does your staff do and not do?
- What do you need?
- What are your students doing?
- Stakeholders?
- How prevalent is DBDM?
- Is there resistance to implementation?

Root Cause Fishbone



Root Cause Fishbone
Directions

Purpose: To generate multiple possible root causes for a given situation.

Directions:

- 1) Based on an analysis of data, identify a question.
- 2) Write the question at the “head” of the fish
- 3) Brainstorm possible root causes to the question and write on the “bones” of the fish
- 4) Circle the root causes you can control.
- 5) Use those root causes for a prioritization conversation.

Individual Reflection:

What Data Set is being used?

For what purpose?


What do I see in the data?

1	
2	
3	
4	
5	
6	

What questions do I have about what I see in the data?

A	
B	
C	
D	
E	
F	
G	

Identifying Red Flag Issues

 Goal: To identify one high-priority performance gap (red flag) that the team would like to reduce/eliminate. Note that this does not mean you are ignoring other areas, just that you are using a representative sample for action research; any changes you make in school or classroom practices will probably positively affect other groups, subject areas, or grade levels.

Step	Process	Facilitator Guidelines
1	Present the KISS	<ul style="list-style-type: none"> ➤ Make sure everyone understands the format of the data set and the content that it contains.
2	Study the data set individually, and record your answers to the question, “What do these data seem to tell us?”	<ul style="list-style-type: none"> ➤ Allow about five minutes. ➤ Ask the group to work silently at this time and to refrain from asking questions about the data.
3	Record individual responses.	<ul style="list-style-type: none"> ➤ Ask groups to share individual responses. Record their observations on a flipchart. ➤ Allow about 10 minutes. Challenge the group to make sure that all insights are included.
4	Repeat steps 2 and 3 as needed	<ul style="list-style-type: none"> ➤ Keep track of time and make sure you have data sets prepared for each session.
5	Identify the six most important responses.	<ul style="list-style-type: none"> ➤ Distribute five dot stickers to each participant. ➤ Ask participants to place dots on the most important responses. (In prioritizing items, team members should consider the degree to which a change would support the school improvement plan and the potential for impact.) They may place their dots on five different items, or they may place more than one (or even all) of their stickers on a single item. ➤ When all dots are posted, organize a group exploration of the results.
6	Answer the question, “What else do we need to know?”.	<ul style="list-style-type: none"> ➤ Create a new flipchart containing the top six items, allowing space by each one for questions. ➤ For each of the six items, ask them to identify questions about what is <i>not</i> shown in the data. ➤ As before, allow a few minutes for silent reflection, then ask group members to report out as you record their points next to the appropriate item. (You may do this as a bulleted list or as a concept map.)
7	Identify the three most	<ul style="list-style-type: none"> ➤ Ask each team member to vote, with a show of hands,

Step	Process	Facilitator Guidelines
	important questions for each item.	<p>on their three top questions.</p> <ul style="list-style-type: none"> ➤ Tally the results on the flipchart.
8	Choose the one area of performance gap that you wish to explore further through additional analysis.	<ul style="list-style-type: none"> ➤ Provide six sticky notes to each participant. ➤ Ask them to write the numbers 1 – 6 on these sticky notes, one number per note. In prioritizing items, team members should consider the degree to which a change would support the school improvement plan and the potential for impact. ➤ Ask participants to place their Post-its on the flipchart, with “1” on the most important item, “2” on the second most important item, etc. ➤ When participants have completed posting their notes, tally the results. The item with the lowest score is considered the most important to the group. ➤ Make sure that you have consensus by asking the group for a show of hands answering “yes,” to the following question: “Whether or not you think this is the most important issue, are you willing to support the group in choosing this issue for immediate exploration and problem solving?” If everyone raises his/her hand, you have consensus. If not, ask any dissenters, “What would it take for you to support the group decision?” Work through the issues, then vote again. (See next page for more information.) ➤ See if you can answer any of the questions related to this issue, using the data you have.

Adapted from Preuss, Paul G. (2003). *School Leader’s Guide to Root Cause Analysis: Using Data to Dissolve Problems*. Larchmont, NY: Eye On Education.

Planning Guidelines

Guidelines for planning:

- Maintain your focus, based on a shared, clearly defined vision of anticipated results on your red flag issue.
- Make sure the entire community is represented in the creation of the plan.
- Make sure everyone has a shared understanding of the plan and is involved in implementing it.
- Make sure your plan is compatible with the school improvement plan. Make this compatibility obvious. Build off current plans and priorities.
- Set goals high and achievable.
- Make sure that resources are in place to support plan.
- Think about incentives and disincentives for individuals to participate in plan.

- Make sure your plan includes research into how best to implement the particular practice(s) you have chosen.
- In your plan, include goals, classroom practices, school practices, criteria for success, indicators, when and how information will be collected, data analysis and interpretation procedures and accountabilities.

Guidelines for presenting your plan:

- Focus on explicit expectations for students, faculty, parents, others.
- Be honest about achievement gaps and present data that can be used to hold school accountable for results.
- Highlight school culture strengths.
- Make data transparent.
- Work at building a shared vision.

Red Flag Issue:	
Goal:	

Key Practice:					
Criteria for success	Indicators	Data collection	Data analysis	Accountabilities	Date