From Insight to Impact: Data-Informed Action Planning for Student Success

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Essential Question(s)

- What role does data-driven decision-making play in ensuring meaningful student outcomes and readiness for life beyond high school?

Summary

This professional development session guides participants through a data-driven decision-making process focused on solving a problem in their schools. Participants begin by sharing their initial ideas about which data points are most impactful. They then explore possible factors that might influence those data points, read a research brief on data-driven decision-making, apply root cause analysis, and practice writing a problem statement while brainstorming the roots and routes of the problem. The session culminates with participants analyzing their own school's real data, crafting problem statements, exploring evidence-based interventions through K20's LEARN platform, and writing SMART goals, closing with a reflection and a preview of next steps toward implementation.

Learning Goals

- Apply a data-driven decision-making process to identify school needs.
- Develop a plan to address the identified school needs.

Attachments

- Anywhere Middle School Data—From Insight to Impact.pdf
- Data-Driven Decision-Making Practitioner's Brief—From Insight to Impact.pdf
- Presentation Slides—From Insight to Impact.pptx
- Roots and Routes—From Insight to Impact.docx
- Roots and Routes—From Insight to Impact.pdf

Materials

- Presentation Slides (attached)
- Data-Driven Decision-Making Practitioner’s Brief (attached; one per participant)
- Anywhere Middle School Data handout (attached; one per group)
- Roots and Routes handout (attached; one per participant)
- School data
- Inflatable beach balls (or alternative)
- Chart paper, giant sticky notes, or similar

10 minutes

Preparation

This professional development session trains participants to make decisions based on data. To facilitate this, prepare your school's data for all participants to review. Include whatever data is available, such as demographics, GPA, attendance, engagement, test scores, and so on. Include any data that affects your your school.

Additionally, prepare six pieces of chart paper (or similar) for the Engage phase. Label each with one of the following titles:

- GPA
- Attendance
- Engagement
- College Access
- Test Scores
- Other

Hang each chart in a different area around the room.

30 minutes

Engage

Use the attached **Presentation Slides** to guide the session. Display **slide 2** and share the title of the session. Transition to **slide 3**. Introduce participants to the Beach Ball Talk and Toss strategy for the first activity. Keep slide 3 displayed to allow participants to reference the questions as they play.

Teacher's Note: Beach Ball Alternatives

If you don't have access to a beach ball for the Beach Ball Talk and Toss, you can use:

- Dice, where each color is instead assigned a number.
- Strips of construction paper in a cup corresponding to each color, and then have participants draw from the cup.
- Popsicle sticks with colored ends.
- Any other method of random question assignment.

Have participants form groups of 5–10. Ask each group to form a circle and give them a beach ball. Have participants take turns tossing the ball to each other. When a group member catches the beach ball, whichever color the participant's right thumb lands on determines what question they will answer. Once they have answered, they should toss the beach ball to another participant. Continue the activity until each person in the group has had a chance to answer at least one question. Ask groups to share out any takeaways or interesting responses from the activity.

Move to **slide 4**, and invite participants to engage with a modified Four Corners strategy. Share the prompt on the slide: "What factor has the greatest impact on high school graduation rates and college and career readiness?" Draw participants' attention to the six prepared charts hanging in different areas of the room. Each chart denotes a type of data points. Have participants stand by the type of dataset they feel has the greatest impact.

After allowing participants some time to reflect and choose a poster that resonates with them, they should discuss their reasoning in the new groups they've formed. If participants choose "Other," have them write on the chart paper what one thing they think has the biggest impact. Following these discussions, invite a few individuals from each group to share their insights with the entire assembly. Have them explain why they selected that particular data type.

Go to **slide 5**. Now that participants have shared their thoughts on the data points, invite them to use the T-Chart strategy, splitting the paper with a T shape underneath the label. Have them write "roots" on one side of the T and "routes" on the other side.

Ask participants to consider what might positively or negatively influence their selected data point. Give them about two minutes to discuss and write on the left side of the chart any "roots" that might cause the data point to be either positive or negative. Next, give participants two minutes to list on the right side any "routes" or ways to improve or positively impact the data.

Invite groups to use the Gallery Walk strategy and rotate clockwise to the next poster. Allow 1–2 minutes for groups to discuss and add any roots or routes they can think of to the poster to which they've rotated. Continue this rotation until each group arrives back at their beginning poster. Ask for volunteers from each group to share something from their poster that they did not consider or something that they have a question about. Once each group has had time to share, ask participants to return to their seats.

Transition through **slides 6–7,** sharing the session objectives and essential question to the extent you see fit.

40 minutes

Explore

Display **slide 8**. Pass out a copy of the attached **Data-Driven Decision-Making Brief** to each participants. Invite participants to use the Jigsaw strategy to read a section of the brief. Number participants off 1–3 or otherwise assign each participant to one of three sections of the brief.

- Section 1: Introduction, Components of Data-Driven Decision-Making
- Section 2: Data-Driven Decision-Making and PLCs, Data-Driven Decision-Making in Practice
- Section 3: Root Cause Analysis in Data-Driven Decision-Making, Conclusion.

Ask participants to use the Why-Lighting strategy as they read, highlighting anything that stands out to them in their section and making a note of why they highlighted it.

Once they've finished reading and taking notes, ask those who read section 1 to share what they highlighted and why. Repeat this for sections 2 and 3.

Transition to **slide 9**. Share the purpose, approach, and impact of root cause analysis as written on the slide.

Move to **slide 10**. Introduce participants to the Roots and Routes strategy for the next activity—reviewing data from a fictional school.

Sort participants into small groups. Distribute a copy of the attached **Anywhere Middle School Data** handout and **Data Roots and Routes** handout to each participant.

Give groups time to review the data, analyze it, and identify the main problem they believe is faced by Anywhere Middle School.

Participants' first step is to determine the problem statement. Remind them to avoid blame and instead focus on the root cause of a problem and how it can be addressed. The problem statement should be as clear and specific as possible. It should also be defined in terms of a solution (e.g., we need more of X). Once groups have had time to develop their problem statement, have them write it into the appropriate box on the Roots and Routes handout.

Participants should then brainstorm "roots," or possible causes of the recorded problem statement. Encourage groups to come up with as many contributing factors as they can.

Finally, participants should brainstorm potential "routes," or solutions that might help with the named problem. Ask groups to come up with a minimum of three solid action steps that could potentially be taken to address this main issue.

Once completed, have groups share their identified roots and routes with one another. Allow participants to gather further insights and potential action steps that they may not have initially considered.

60 minutes

Explain

Navigate to **slide 11** and pass out prepared copies of your school's data. Have participants form small groups to analyze their school's data to identify performance gaps. Invite participants to use a modified S-I-T strategy as they read, starring the strengths they found in the data, putting a (!) next to what they found interesting, and a (?) next to things they found thought-provoking. Point out the importance of measurable, malleable, actionable, and impactful data and multiple data points to support action plans. Remind participants to focus on what the data is conveying rather than crafting solutions at this time.

Give groups time to read and analyze the data.

Pass out a blank piece of chart paper to each group and move to **slide 12**. Now that participants have looked through the data, have them start crafting their own problem statement on the chart paper. Have them first list the possible causes supported by the data they just reviewed. What are areas of improvement that could potentially be addressed? Reiterate to participants the purpose of this root cause analysis. Give participants time to record their problem statement, causes, and potential interventions on their chart paper.

Teacher's Note: Recording Output

Recording on chart paper enables participants to more easily share their findings in the next activity. If need be, you can instead distribute a second Data Roots and Routes handout or scrap paper to each group.

90 minutes

Extend

Invite participants to now start thinking about interventions. Let participants know that evidence-based interventions have the highest chance of succeeding. Direct participants to K20's LEARN platform to begin searching for literature reviews. Allow participants some time to explore these literature reviews on LEARN and elsewhere if needed.

Afterward, ask participants if they found any literature reviews that may be useful in crafting their proposed intervention. Invite participants to consider undertaking a more targeted and expansive literature review later, once the school has settled on a shared problem and vision for potential solutions.

Transition to **slide 13**. Share the meaning behind the acronym SMART in SMART goals, noting that SMART goals center on an outcome rather than a practice or set of behaviors. Transition to **slide 14** to break the acronym down for participants. On **slide 15,** share the example SMART goal.

Invite participants to craft their own SMART goal related to their problem statement. They should consider this practice—the actual goal that they may attempt to meet in their schools could be different.

20 minutes

Evaluate

Transition to **slide 16**. Invite participants to reflect with the 3-2-1 strategy. Give participants time to record their responses. Have a few volunteers share out their responses.

Move to **slide 17** and share with participants that the next steps in the process: create a main goal as a group, research and decide on an intervention, and begin implementation.

Research Rationale

Data-driven decision-making is a continuous process centered on the use of data, numerical and written, to reach evidence-based conclusions (Bowers & Krumm, 2021; Love et al., 2008). This process should focus on student learning and closing the achievement gap through teacher action rather than student accountability (Bowers & Krumm, 2021; Love et al., 2008; Mandinach & Schildkamp, 2021). Schools that implement data-based practices show improved student achievement and student engagement (Albiladi et al., 2020; Debnam et al., 2022).

Resources

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