Using Student Achievement Data to Support Instructional Decision Making

Recommendation 1
Make data part of an ongoing cycle of instructional improvement.

Recommendation 2
Teach students to examine their own data and set learning goals.

Recommendation 3
Establish a clear vision for schoolwide data use.

Recommendation 4
Provide supports that foster a data-driven culture within the school.

Recommendation 5
Develop and maintain a districtwide data system.

This document provides a summary of recommendations from the WWC Using Student Achievement Data to Support Instructional Decision Making Practice Guide (Hamilton et al., 2009). *Establish a clear vision for schoolwide data use* is a school level recommendation that works in conjunction with the other recommendations in this series.

Recommendation 3

Establish a clear vision for schoolwide data use.

To foster effective data-driven decision making, schools must build a strong culture of data use, characterized by collaboration across grade levels and subjects to diagnose issues and improve practices. The success of this culture depends on factors like planning, leadership, implementation, and attitudes. Schools should form a data team to ensure data activities are collaboratively developed and aligned with goals, and create a clear, schoolwide data use plan. It is recommended that school data teams and leaders develop a common language and provide ongoing support for school staff around data use.

Strategy 1

Establish a schoolwide data team that sets the tone for ongoing data use.

SC Principal Standards: PADEPP Standard 1 (Vision); Standard 2 (Instructional leadership); Standard 3 (Effective management); Standard 8 (Staff development)

Schoolwide data use begins with the creation of a data team, which will guide the school's vision for effective and sustainable data use. This team should include a diverse mix of stakeholders, such as administrators, teachers from various subjects and grade levels, classroom support professionals, and possibly a district-level staff member with expertise in research or evaluation. The leader should select individuals who either have experience or interest in data analysis and interpretation, as well as strong leadership skills to motivate others. The role of the data team is to act as advisors on data use, representing the entire school community to ensure collaborative decision making. Data team members are not responsible for enforcing data use or managing related activities but instead focus on clarifying the school's vision for data use, modeling effective practices, and encouraging staff to integrate data into their instructional decisions.

Example

A middle school leader decides to form a data team to strengthen the use of data in guiding instruction and improving student outcomes. Recognizing the importance of a diverse team, the leader carefully selects members to ensure a broad range of perspectives. The first choice is the assistant principal, who has a strong understanding of school operations and can offer insight into aligning data use with schoolwide goals. Next, the leader reaches out to two teachers—one from the math department and another from the English department—both of whom have shown an interest in analyzing student progress during previous staff meetings. The leader also invites a reading coach known for her enthusiasm for using assessment data to target reading interventions. Finally, the leader seeks out a district-level staff member who specializes in student assessment and data analysis. This member will provide a broader perspective on districtwide trends and help the team align the school's efforts with district priorities.

After inviting these members to join the data team, the leader emphasizes their role as advisors and collaborative decision makers. The leader makes it clear that their primary responsibility is to help clarify the school's vision for data use and to support fellow teachers in integrating data into their instructional decisions and practices.

Strategy 2

Define critical teaching and learning concepts.

SC Principal Standards: PADEPP Standard 1 (Vision); Standard 2 (Instructional leadership)

One of the first tasks of the school data team is to establish a shared vocabulary for key concepts related to teaching, learning, and data use. By aligning definitions, the data team aims to reduce misunderstandings and conflicting assumptions, fostering a more cohesive and effective approach to using data for school improvement. Key terms to consider defining include:

- Data
- Evidence
- Learning
- Achievement
- Progress

Example

As the newly formed middle school data team begins meeting regularly, the leader facilitates discussions where team members share their perspectives on what terms like "data" and "evidence" mean to them.

One teacher initially suggests that "data" should primarily refer to standardized test scores, as these are often used to measure student performance. However, the reading coach emphasizes the importance of considering other forms of data, such as classroom observations, attendance records, and student feedback, to get a more holistic view of each student's progress. After some discussion, the team agrees that "data" should encompass all available information that helps understand a student's learning experience.

Through this discussion, the team recognizes the importance of having a shared understanding of several key terms. The data team decides to create a glossary of terms, which they share with the entire school staff during a professional development session. They encourage teachers to refer to this shared vocabulary during meetings and discussions about student progress. As a result, the school staff is better able to communicate clearly about data and use it effectively in decision making, minimizing misunderstandings and fostering a more unified approach to improving student outcomes.

Strategy 3

Develop a written plan that articulates activities, roles, and responsibilities.

SC Principal Standards: PADEPP Standard 1 (Vision); Standard 7 (Interpersonal skills); Standard 8 (Staff development)

It is recommended that the data team, with input from the entire school staff, develop a detailed plan for using data to support school-level goals for improving student achievement. The team should begin by revisiting existing school goals to ensure they are attainable, measurable, and relevant to the school's specific context. If existing goals don't meet the criteria, the team may create new short- and medium-term goals that do.

The plan should outline specific actions for using data in instructional decisions, assign responsibilities to staff members, set timelines, and link each action to long-term goals. The data team should revisit and revise this plan annually, using new data to adjust strategies as needed, creating a continuous cycle of improvement and fostering a culture of data-based decision making throughout the school.

Figure 1. Plan for using data to support school-level goals (Hamilton et al., 2009)

Schoolwide Goal: Increase percentage of students reading on grade level 5 percentage points per year, to reach 75 percent in five years			
Action	**Path to Goal**	**Team Member**	**Timeline**
Plan and facilitate monthly grades 4–6 team meetings to review Ms. Sanders's data displays and share best practices in mini-lessons co-planned by Mr. Johnson.	• Focus on areas of greatest student need • Calibrate and elevate expectations among teachers • Streamline instructional practices • Share practices that work • Encourage vertical alignment between grades	Mike Thompson, grades 4–6 team leader	Hold first meeting by October 10; second by November 15
Plan and facilitate monthly grades 1–3 team meetings to review Ms. Sanders's data displays and share best practices in mini-lessons co-planned by Mr. Johnson.		Beth Miller, grades 1–3 team leader	
Prepare well-chosen data graphs on PowerPoint (state or interim data updates) for monthly grade-level team meetings.	• Help teachers gain facility in using data • Focus teachers' attention and inquiry on areas of particular strengths and weaknesses in students' reading skills	Erin Sanders, data facilitator	Carry out monthly; distribute examples at November data team meeting
Have teachers choose their favorite reading instructional strategy and prepare sample lessons and evidence of student work. Schedule teachers to present these during part of their grade-level team meetings.	• Share and standardize best practices among classrooms • Encourage culture of instructional improvement • Reinforce evidence-based practice	Lionel Johnson, reading coach	Bring schedule to November data team meeting; hold first session by October 10.
Register and prepare data team for 4-day offsite workshop on interpreting assessment data, creating data displays, and helping teachers use data daily.	• Increase ability of data team to understand and use data • Develop capacity for distributing leadership within the school	Samantha Roberts, assistant principal	October 15

Strategy 4

Provide ongoing data leadership.

SC Principal Standards: PADEPP Standard 7 (Interpersonal skills); Standard 8 (Staff development)

Once the data plan has been developed and shared, the data team should provide ongoing guidance to school staff to build their capacity for using data effectively. Initially, data team members regularly engage with staff, serving as data facilitators through individual or small group meetings to explain the school's approach to data use. Team members offer resources like professional development, access to technology, and modeling data use strategies. Data team members also participate in grade- and subject-level meetings to ensure collaborative time is used effectively when analyzing data. As staff become more comfortable with data, the need for intensive guidance decreases. The data team meets monthly to monitor the progress of the data plan, share successes and challenges, and plan next steps. This approach fosters a culture of distributed leadership, ensuring that the responsibility for data use is shared across the school rather than concentrated on a single individual, helping the entire school community advance toward its goals.

Example

To ensure the school data plan is implemented, the middle school data team schedules a series of small-group workshops where teachers learn to analyze student assessment data, set instructional goals, and track progress over time. The data team also makes sure teachers have access to the necessary tools and training, such as providing tutorials on how to use the school's online data management system. They compile a list of relevant professional development opportunities and share it with staff. The data team members also join grade-level meetings or PLCs to ensure that time for collaboration is spent effectively. For example, during a fourth-grade team meeting, a data team member helps teachers analyze math quiz results, suggesting strategies to adjust instruction based on the data. Over time, as teachers grow more confident in analyzing and using data on their own, the data team shifts to a less hands-on role, focusing on addressing specific questions and refining strategies rather than offering basic training. Throughout the school year, the data team meets monthly to review the implementation of the data plan, discuss successes and challenges, and adjust the plan as needed.

Potential Roadblock 1

School staff do not have time to develop an additional plan for how to use data.

Suggested Approach. To alleviate the pressure of creating a new plan, the plan for data use could be incorporated into an existing school improvement plan.

Potential Roadblock 2

No one is qualified (or wants) to be on the data team.

Suggested Approach. Consider the strengths and leadership skills of individuals in your school; many have related training and skills that will make them strong team members. For example, new teachers, or those who recently completed continuing education programs, may have applicable data knowledge if their programs provided training on the use of data to make instructional decisions. Similarly, some teachers and staff may be able to provide enthusiasm and leadership that inspire others to support the data use process. Once qualified and interested staff are identified, consider encouraging participation in the data team by offering a small stipend from the principal's discretionary funds.

Potential Roadblock 3

The few data-savvy staff at the school are overwhelmed by questions and requests for assistance.

Suggested Approach. It is important for leaders to protect people's time by clearly defining roles and responsibilities in enforceable job descriptions. Leaders also can encourage all members of the data team to train other educators to use and interpret data. Phasing data use into the entire school can help prevent staff burnout, deepen staff data literacy, and encourage schoolwide support and implementation of the data-based decision-making process.

Potential Roadblock 4

The district does not have research and development staff to participate in the school-level data team.

Suggested Approach. The size of a district may determine if research and development staff are present, or if there are enough research and development staff to participate in school-level data teams. If district staff cannot participate in school level teams, however, the leader should ensure that any district-level message about data use is accurately presented to data team members.

Additional Resources

- [Supporting a Culture of Data Literacy and Use to Improve Instructional Quality](#) (Regional Educational Laboratory Pacific, 2023)
    - This fact sheet provides educators and school/system leaders with some key considerations for developing an effective culture of data use that can help improve instruction and student support services. Developed to support a REL Pacific partnership project in the Commonwealth of the Northern Mariana Islands, the information is broadly applicable to schools and districts across the Pacific Region and U.S. states.
- [Data Use in the Continuous Improvement Cycle Training](#) (Frederking et al., 2021)
    - In this training series, REL Midwest worked with afterschool mentors and educational support staff at Change Inc. in St. Paul, Minnesota, to improve their data literacy skills in the context of continuous improvement and equity. The slide decks are available online.
- [Wisconsin Technical College System Research Methods Training](#) (Regional Educational Laboratory Midwest, 2019)
    - REL Midwest provided two training sessions for the Wisconsin Technical College System to build participants' data literacy, knowledge of research methods, and capacity to use data and research to improve their programs. The slide decks and handouts are available online.

References

Frederking, D., Conway-Turner, J., & Bradley, D. (2021). *Data use in the continuous improvement cycle training.* U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. https://ies.ed.gov/use-work/resource-library/resource/training-material/data-use-continuous-improvement-cycle-training

Hamilton, L., Halverson, R., Jackson, S., Mandinach, E., Supovitz, J., & Wayman, J. (2009). *Using student achievement data to support instructional decision making* (NCEE 2009-4067). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. https://ies.ed.gov/ncee/WWC/PracticeGuide/12

Regional Educational Laboratory Midwest. (2019). *Wisconsin Technical College System research methods training.* U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. https://ies.ed.gov/use-work/resource-library/resource/training-material/wisconsin-technical-college-system-research-methods-training

Regional Educational Laboratory Pacific. (2023). *Supporting a culture of data literacy and use to improve instructional quality.* U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Pacific. https://ies.ed.gov/sites/default/files/migrated/rel/regions/pacific/pdf/pa_factsheet_cultureofdataliteracy.pdf