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). *Teach students to examine their own data and set learning goals* is a classroom level recommendation that works in conjunction with the other recommendations in this series.

Recommendation 2

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

Teachers should guide students in regularly using achievement data to track their progress and set personal learning goals. This process, similar to the data use cycle for teachers, can boost motivation by showing attainable goals, highlighting real gains, and giving students control over their success. Teachers can adjust their teaching based on these goals to support student motivation. Students benefit most when they understand learning objectives and receive data in an accessible format, with tools like rubrics to help clarify goals. Data-driven practices, coupled with strategies like revisiting incorrect answers, enhance student learning through formative assessment and feedback.

Strategy 1

Explain expectations and assessment criteria.

SC Teaching Standards: INST.SO.1, INST.SO.4, PLAN.ASSESS.1, PLAN.ASSESS.2

Teachers should clearly communicate expectations to help students interpret their achievement data effectively, outlining specific content knowledge and skills needed, and the goals for lessons, units, and the year. Rubrics play a crucial role in this process by providing clear criteria for assessment, especially for complex tasks like writing essays, delivering speeches, or conducting experiments. Teachers should introduce rubrics at the start of assignments and use them to guide feedback, allowing students to assess sample work to understand the evaluation criteria better. Additionally, teachers should connect classroom learning to state standards by regularly revisiting key concepts throughout the year and helping students track these standards to prepare for accountability tests.

Example

In a seventh-grade English class, the teacher introduces a unit on persuasive writing. On the first day of the unit, the teacher explains the learning objectives and presents a rubric that outlines the assessment criteria for the final essay, including clarity of thesis, strength of arguments, use of evidence, and proper grammar.

To help students understand the rubric, the teacher shares a sample essay and guides the class in evaluating it together using the rubric. They annotate the sample, highlighting areas where the thesis is clear and where the evidence supports the argument, while also noting weaknesses in transitions and grammar. This discussion ensures students grasp how their work will be assessed and provides concrete examples of successful and problematic writing (worked examples; see Teaching Elementary School Students to Be Effective Writers Practice Guide, Recommendation 2b [Graham et al., 2012]).

The teacher further supports understanding by transforming the rubric into a visual flowchart, showing how each criterion connects to the overall grade. This flowchart is displayed prominently in the classroom for reference throughout the unit (visual aids; see Improving Adolescent Literacy Practice Guide, Recommendation 1 [Kamil et al., 2008]).

Midway through the unit, students engage in a self-assessment activity where they use the rubric to evaluate their drafts. They rate their thesis clarity, evidence use, and overall structure on a scale of 1 to 5, predicting how well they think their essay aligns with each rubric criterion. This reflective activity encourages students to identify areas for improvement and adjust their work accordingly (metacognition; see Organizing Instruction and Study to Improve Student Learning Practice Guide, Recommendation 6a [Pashler et al., 2007]).

Throughout the unit, the teacher connects the rubric criteria to state writing standards by emphasizing how becoming proficient in thesis statements, using evidence effectively, and refining transitions are critical not only for the unit's success but also for broader state assessment goals. By explicitly tying classroom learning to these standards, the teacher highlights the real-world relevance of mastering the rubric criteria (see Using Student Achievement Data to Support Instructional Decision Making Practice Guide, Recommendation 2 [Hamilton et al., 2009]).

Strategy 2

Provide feedback to students that is timely, specific, well formatted, and constructive.

SC Teaching Standards: INST.AF.1, INST.AF.4

Providing students with constructive feedback can enhance academic achievement by helping them understand their strengths and weaknesses. Effective feedback explains the reasons behind the grades or scores given to student work and highlights specific areas for improvement. Feedback should be thoughtful, targeted, and designed to guide students toward a clearer understanding of how to progress academically. Characteristics of effective feedback include:

- **Timely** - Feedback should be provided to students within a week of the assignment being collected.
- **Appropriately formatted** - Feedback should be provided in a delivery mode that fits best with the students' age and grade, and the assignment.
- **Specific and constructive** - Feedback should be concrete and provide specific suggestions for improvement.

Example

After grading seventh-grade persuasive essays, the teacher gives each student detailed feedback, directly tied to the rubric they've been using. For one student, the teacher writes, "You've done a great job supporting your points with strong examples! To make your essay even better, let's work on clarifying your thesis. Think about how you can summarize your main idea in one clear sentence at the end of your introduction."

To help students understand the feedback, the teacher shares a sample essay with both a strong and a weak thesis. Together, the class discusses what makes the stronger thesis effective and how the weaker one could be improved. Students then reflect on how these examples relate to their own essays and what they can adjust (scaffolded feedback; see Teaching Elementary School Students to Be Effective Writers Practice Guide, Recommendation 2b [Graham et al., 2012]).

Next, the teacher sets up a peer review session. Students trade essays and use the rubric to highlight one strength and suggest one improvement. This activity not only gives students more feedback but also helps them think critically about writing and how to apply the rubric to real work (peer assessment; see Organizing Instruction and Study to Improve Student Learning Practice Guide, Recommendation 4 [Pashler et al., 2007]).

The teacher wraps up by reminding students how these skills connect to the big picture: "Clear writing is a tool you'll need not just for tests but in so many other parts of life." The teacher points out that improving skills like writing strong arguments and using evidence now will help students succeed in future projects and assessments (see Using Student Achievement Data to Support Instructional Decision Making Practice Guide, Recommendation 1 [Hamilton et al., 2009]).

Strategy 3

Provide tools that help students learn from feedback.

SC Teaching Standards: INST.AF.3, INST.AM.5, PLAN.ASSESS.2

Providing students with assessment data is not enough; they need time, tools, and guidance to analyze and use the feedback effectively. Teachers should dedicate 10–15 minutes of classroom time for students to reflect on feedback, review their performance, and ask questions. During this time, teachers can use tools like templates for listing strengths and weaknesses, reflection worksheets, progress-tracking grids, and goal-setting prompts to help students engage with the feedback.

For instance, after returning a test, a teacher might ask students to identify their strengths and weaknesses, set realistic improvement goals, and plan specific actions to address skill gaps. Students with strong scores might focus on enrichment activities. Tools like error analysis worksheets in math can help students diagnose their mistakes, distinguishing between careless errors and conceptual misunderstandings. This structured reflection process empowers students to take responsibility for their learning and make data-driven improvements.

Example

In a seventh-grade math class, the teacher kicks off a goal-setting activity by handing out test reports and walking students through their results. "Take a look," the teacher says, "and think about one thing you're proud of and one area you want to grow in."

To help with this, the teacher gives students a Goal-Setting Worksheet that breaks the process into simple steps:

- **What I'm Proud Of:** Something I'm doing well (e.g., "I'm great at solving single-variable equations").
- **What I Need to Work On:** An area I want to improve (e.g., "I need to get better at multi-step equations").
- **My Goal:** A clear target (e.g., "I'll get 8 out of 10 multi-step problems right on my next quiz").
- **My Action Plan:** Steps I'll take to get there (e.g., "I'll practice three problems each night and ask for help if I'm stuck").

Students fill out the worksheet, using their test data to choose a goal. One student might write, "I'll work on understanding multi-step equations by practicing a few problems from the homework packet every night." The worksheet helps students feel confident about what to focus on (goal-setting templates; see Using Student Achievement Data to Support Instructional Decision Making Practice Guide, Recommendation 2 [Hamilton et al., 2009]).

Next, the teacher shares a bar graph showing how the class performed overall, with individual scores anonymized. "This shows how we're all doing," the teacher explains. "It's not about comparing yourself to others—it's about seeing where you're doing well and where you can improve." The graph helps students visualize their progress and zero in on their personal focus areas (visual data displays; see Improving Adolescent Literacy Practice Guide, Recommendation 1 [Kamil et al., 2008]).

Each week, the class spends a few minutes updating their worksheets. Students write a quick note about how they're doing, such as, "I'm doing better with multi-step problems, but I still need more practice with fractions." They adjust their action plans as needed, such as adding extra practice on specific concepts (self-monitoring; see Organizing Instruction and Study to Improve Student Learning Practice Guide, Recommendation 6a [Pashler et al., 2007]).

To keep students motivated, the teacher connects their goals to the bigger picture: "The skills you're building now aren't just for math class. They'll help you with algebra next year and even problem solving in science and everyday life." This makes the goals feel more meaningful and worth pursuing (personal relevance; see Improving Adolescent Literacy Practice Guide, Recommendation 4 [Kamil et al., 2008]).

Strategy 4

Use students' data analyses to guide instructional changes.

SC Teaching Standards: INST.AF.4, PLAN.IP.1

Data analysis tools benefit both students and teachers by fostering learning and guiding instruction. Teachers can review students' self-assessments and goals to identify common areas of difficulty and motivational factors. This information allows teachers to tailor instruction effectively, such as organizing small group activities focused on shared goals or conducting whole-class reviews of frequently identified weaknesses. By aligning teaching strategies with student needs, teachers can provide targeted support and enhance learning outcomes.

Example

In a seventh-grade science class, the teacher introduces a Progress-Tracking Chart to help students monitor how they're doing in a unit on ecosystems. "This is your personal tracker," the teacher explains. "It's a way to see how much you're growing!" The chart includes spaces for students to log their quiz scores, mark which topics they found tricky (like food webs or energy flow), and jot down what they'll work on next (progress-tracking tools; see Using Student Achievement Data to Support Instructional Decision Making Practice Guide, Recommendation 2 [Hamilton et al., 2009]).

To make things more exciting, the teacher creates a colorful bar graph showing how the class as a whole is improving over time: "See how we're all getting better together? Now, let's look at how you're doing individually." The visual makes it easier for students to connect their own progress to the bigger picture and celebrate their growth (visual data displays; see Improving Adolescent Literacy Practice Guide, Recommendation 1 [Kamil et al., 2008]).

At the end of the week, students take a few minutes to reflect on their charts. They answer simple prompts like, "What's one thing I learned this week?" or "What can I do better next time?" For instance, a student might write, "I did great on identifying producers and consumers, but I need to study energy pyramids more." These reflections help students stay focused and think about what strategies work best for them (reflection prompts; see Organizing Instruction and Study to Improve Student Learning Practice Guide, Recommendation 6a [Pashler et al., 2007]).

The teacher also connects the activity to the big picture: "These skills aren't just for quizzes. Understanding ecosystems now sets you up for high school science and even real-world problem solving." This helps students see how their progress matters in the long run, keeping them motivated (progress alignment; see Teaching Secondary Students to Write Effectively Practice Guide, Recommendation 1 [Graham et al., 2016]).

Potential Roadblock 1

Students view the feedback they receive as a reflection on their ability rather than an opportunity for focused improvement.

Suggested Approach. Teachers should provide feedback that is clear and focused on helping students improve, emphasizing their performance in relation to specific learning goals rather than making broad statements about their abilities. Encouraging students to set goals can make feedback more meaningful, as students are more likely to see it as valuable when connected to a larger objective they are working toward.

Potential Roadblock 2

Teachers within a school have different approaches to providing feedback to their students.

Suggested Approach. Teachers can enhance their effectiveness by engaging in professional development focused on providing concrete, constructive feedback that helps students learn from their own data. Collaboration with colleagues can foster a shared understanding of formative feedback, including its purpose, timing, and delivery. Inviting students to share their experiences and responses to feedback can further inform and improve instructional practices.

Potential Roadblock 3

Teachers are concerned that they do not have enough instructional time to explain rubrics or help students analyze feedback.

Suggested Approach. Incorporating time to teach students how to analyze feedback and understand assessment tools is vital and should be seamlessly integrated into regular instruction rather than treated as an extra activity. This practice fosters a habit of learning from feedback, encouraging students to become more independent over time. Additionally, it positions students as active participants in a school culture that values data-driven learning.

Additional Resources

Using Student Achievement Data to Support Instructional Decision Making (Hamilton et al., 2009)

- **Recommendation 1**: Make data part of an ongoing cycle of instructional improvement.
    - Use formative feedback loops to refine instruction.
- **Recommendation 2**: Teach students to examine their own data and set learning goals.
    - Provide structured goal-setting templates.
    - Incorporate student reflection on progress.
    - Align goals with broader state standards and long-term outcomes.

Teaching Elementary School Students to Be Effective Writers (Graham et al., 2012)

- **Recommendation 2b**: Teach students to use the writing process for a variety of purposes.
    - Use scaffolded feedback, such as annotated examples.
    - Incorporate gradual release strategies to support writing independence.

Teaching Secondary Students to Write Effectively (Graham et al., 2016)

- **Recommendation 1**: Explicitly teach appropriate writing strategies using a Model-Practice-Reflect instructional cycle.
    - Provide worked examples to illustrate writing criteria.
- **Recommendation 3**: Use assessments of student writing to inform instruction and feedback.
    - Provide timely, specific, and actionable feedback tied to rubrics.

Organizing Instruction and Study to Improve Student Learning (Pashler et al., 2007)

- **Recommendation 4**: Help students build explanations by asking and answering deep questions.
    - Use reflection prompts to encourage metacognitive thinking.
- **Recommendation 6a**: Teach students how to use delayed judgment of learning techniques to identify concepts that need further study.
    - Encourage students to self-monitor and adjust goals based on progress tracking.

Improving Adolescent Literacy: Effective Classroom and Intervention Practices (Kamil et al., 2008)

- **Recommendation 1**: Provide explicit vocabulary instruction.
    - Use visual data displays to reinforce comprehension and connections.
- **Recommendation 4**: Increase student motivation and engagement in literacy learning.
    - Tie learning goals to personal interests and long-term aspirations.

References

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