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## Using Student Data to Drive Instruction

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*Center on Instruction*

The *Using Student Achievement Data to Support Instructional Decision Making* practice guide published by IES defines data-based decision making as “...teachers, principals, and administrators systematically collecting and analyzing various types of data, including demographic, administrative, process, perceptual, and achievement gap, to guide a range of decisions to help improve the success of students and schools” (pp. 46). A number of activities and decisions undertaken by schools and districts involve data-based decision making, such as screening students for placement, using progress monitoring or formative assessments to determine curricular changes, and interpreting annual performance data to identify areas of weakness for future educational focus.

Data systems allow for the collection, interpretation, and use of student data. A universal screening system can be used at the beginning and middle of the school year to identify students who are academically on-track and those who are at-risk for difficulties in key critical content areas, such as reading and mathematics (Gersten, Beckmann, Clarke, Foegan, Marsh, Star, & Witzel; 2009; Gersten, Compton, Connor, Dimino, Santoro, Linan-Thompson, & Tilly, 2008). At-risk students can be selected to receive research-based interventions. Schools can then use progress monitoring data (collected on a frequent basis) to gauge the students’ progress (or response to an intervention) towards critical academic outcomes (Tilly, 2008). Formative assessments can be collected in classrooms to give teachers feedback about students’ understanding of the material presented and what minor adjustments to their instruction may be needed to improve students’ understanding.

Employ the use of data systems in broader decision-making by utilizing annual state testing results to evaluate the effectiveness of their instructional systems. For example, a district may implement a new core reading series and analyze state testing results to determine if the new reading series is increasing student outcomes, or they may look at areas of poor performance in state testing results to determine where to allocate professional development dollars.

### **Action Principles**

#### **For District**

1. Develop a data system or adopt an available data system that enables analysis of student outcomes at multiple levels (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009).
2. Develop a district-wide plan for collecting, interpreting, and using data. Dedicate time and develop structures for district schools and teachers to use data to alter instruction (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009).
3. Train teachers and principals in how to interpret and use data to change instruction (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009).
4. Use annual state testing performance data to evaluate the overall effectiveness of instructional services provided by the district. Conduct deep analysis to determine areas in need of improvement (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009).

#### **For School**

1. Identify which students are at risk for difficulties with certain subjects, such as mathematics or reading, and provide more intense instruction to students identified as at risk (Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009; Gersten, Beckmann, Clarke, Foegen, Marsh, Star, & Witzel, 2009; Gersten, Compton, Connor, Dimino, Santoro, Linan-Thompson, & Tilly, 2008).
2. Employ efficient, easy-to-use progress monitoring measures to track the progress of students receiving intervention services towards critical academic outcomes (National Center on Response to Intervention, n.d.; Hamilton, Halverson, Jackson, Mandinach, Supovitz, & Wayman, 2009; Gersten, Beckmann, Clarke, Foegen, Marsh, Star, & Witzel, 2009; Gersten, Compton, Connor, Dimino, Santoro, Linan-Thompson, & Tilly, 2008).

3. Use formative assessments to evaluate learning and determine what minor adjustments can be made to instruction to enhance student understanding (The National Center for Fair and Open Testing, 2007).

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