

ASK A REL Response

Formative Assessment Use December 2013

Background

REL Southwest received a request for information seeking research on using data from formative assessments to determine the instructional strategies a teacher should implement to improve student understanding of the material covered by the assessment, as well as how to use student formative assessment data to determine actions to be included on teachers' professional growth plans.

Search of Databases and Websites

Institute of Education Sciences (IES) website (www.ies.ed.gov)

ERIC database (www.eric.ed.gov)

EBSCO's Academic Search Elite database

Google Scholar (scholar.google.com)

Keywords and Search Strings Used in the Search

Formative assessment; data-driven decisionmaking; teacher evaluation; professional growth plans; instructional strategies

Criteria for Inclusion

REL Southwest selected the following resources that provide research on use of formative assessment data based on

- Data-driven decisionmaking
- Teacher evaluation
- Formative assessment use

Results were further narrowed by the following factors:

Date of the Publication: The most current and relevant information (published from 2007 to the present) was included.

Source and Funder of the Report/Brief/Article: Priority was given to publications written by prominent authors or produced by well-known organizations in the field of teacher instructional practices. Some materials selected are readily accessible and free of charge on the Internet. However, as some of the most relevant materials on this topic are presented in books, which cannot be accessed free of charge on the Internet, those sources are provided as well.

We were not able to find many resources specific to using formative assessment results. However, the listed references may still be of use.

Reports

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: U.S. Department of Education, Institute of Education Science, National Center for Education Evaluation and Regional Assistance. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/dddm_pg_092909.pdf

REL Southwest staff summary of report: Responding to the call for educators to use data-driven decisionmaking, this report provides a framework for using student achievement data to guide instructional decisionmaking, particularly around how to use data to adapt lessons or assignments to student needs, change or modify classroom goals and objectives, and create or modify student-grouping arrangements. The authors also present suggestions to assist educators and administrators in creating and fostering the organizational and technological conditions that are prerequisites to effective data use. Action steps for implementing the framework are also provided.

Heppen, J., Faria, A., Thomsen, K., Sawyer, K., Townsend, M., Kutner, M., Stachel, S., Lewis, S., & Casserly, M. (2010). *Using data to improve instruction in the Great City Schools: Key dimensions of practice*. Washington, DC: Council of the Great City Schools. Retrieved from http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/Strand%20%20Report%20-%20Key%20Dimensions%20of%20Data%20Use_122110.pdf

REL Southwest staff summary of report: The first in a series of three reports investigating relationships between data use and instructional improvement in the Great City Schools, this paper seeks to identify “best practices” regarding using interim assessment data to improve instruction and target support. The report includes a review of the related literature, which the authors utilized to establish a theory of action to guide this and future reports. The theory of action includes four key dimensions of practice: Context, Support for Data Use, Working with Data, and Instructional Responses. The literature supporting each of these key dimensions is summarized, and important aspects of each of the key dimensions are highlighted.

Heppen, J., Jones, W., Faria, A., Sawyer, K., Lewis, S., Horwitz, A., Simon, C., Uzzell, R., Casserly, M. (2011). *Using data to improve instruction in the Great City Schools: Documenting current practice*. Washington, DC: Council of the Great City Schools. Retrieved from <http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/Strand%20%20Report%20-%20Documenting%20Current%20Practice.pdf>

REL Southwest staff summary of report: This is the second report in a series of three reports examining relationships between data use and instructional practices. The report documents current practices of urban school districts with regard to interim assessments, data systems, and data-based decisionmaking. The study uses data from a survey administered to curriculum coordinators and research directors in the member districts of the Council of the Great City Schools as well as case studies based on site

visits to four selected urban school districts. The surveys asked respondents to report on their use of interim assessments and data systems. During the site visits, researchers investigated how district administrators, principals, and teachers worked with interim data to inform educational decisionmaking.

Faria, A., Heppen, J., Li, Y., Stachel, S., Jones, W., Sawyer, K., Thomsen, K., Kutner, M., Miser, D., Lewis, S., Casserly, M., Simon, C., Uzzell, R., Corcoran, A., & Palacios, M., (2012). *Charting success: Data use and student achievement in urban schools*. Washington, DC: Council of the Great City Schools. Retrieved from http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/Charting_Success.pdf

REL Southwest staff summary of report: This is the last in a series of three reports investigating relationships between data use and instructional improvement in urban schools. This report focuses on a study of the empirical relationships between teachers' and principals' use of student interim assessment data and student achievement on end-of-year accountability tests. In particular, this study looked at the extent to which data-use practices were related to student achievement. The study utilized data from more than 1,500 teachers, 150 school principals, and 60,000 students across four urban school districts during the 2009–10 school year. Results showed that both teachers' and principals' *General Data-Use* practices and perceptions were positively related to student achievement for some grades and subject areas. Looking more specifically at the components that make up *General Data-Use*, teacher-reported *Attention to Data in the Classroom* was positively associated with student achievement in middle grades mathematics and elementary grades reading, meaning that the more teachers reported reviewing interim student data and responding in the classroom, the higher their students' achievement on the end-of-year state assessment. Key components of *General Data-Use* for principals included *Attention to Data in the Schools* and *Supports for Data Use*. That is, principals who targeted teacher professional development on the basis of interim assessment results or adapted school improvement plans on the basis of interim assessment results (i.e., *Attention to Data*) and who held positive perceptions of various supports for data use (e.g., common meeting times to discuss data, the presence of a data coach, the quality of the data infrastructure, and professional development around data use) had higher levels of student achievement on the end-of-year state assessment in some grades and subjects.

Goertz, M., Olah, L., & Riggan, M. (2009). *From testing to teaching: The use of interim assessment in classroom instruction*. Philadelphia, PA: The Consortium for Policy Research in Education. Retrieved from <http://files.eric.ed.gov/fulltext/ED519791.pdf>

REL Southwest staff summary of report: This report describes a study investigating how school and district policies and practices support educators' views of and approaches to interim assessment, encourage productive use of these assessments with various capacity-building approaches, and ultimately support changes in instruction. At the school-level, this study focused on instructional support, capacity for data use, school leadership, and culture and routines; at the district-level, the study looked at the accountability context, instructional guidance, and the culture of data use. The study used data collected via classroom observations; teacher, principal, and district administrator interviews; observations of district and school meetings; a survey of teachers' Content Knowledge for Teaching-Math; and other artifacts from nine elementary schools located in Philadelphia and a surrounding suburb. Results for the

study are presented as separate case studies of Philadelphia and the suburb describing each district's curricular and interim assessment policies; district and school expectations for the use of interim assessment results; and district and school supports for analyzing and responding instructionally to these data.

Books

Bambrick-Santoyo, P. (2010). *Driven by data: A practical guide to improve instruction*. San Francisco, CA: Jossey-Bass.

REL Southwest staff summary of book: This book describes a framework for installing data-driven instruction as part of a school's culture, as well as professional development activities to use with school staff. In Part One, "The Framework," the author outlines a framework for effective data-driven instruction, including chapters on assessment, analysis, action, culture, and overcoming obstacles. An application section provides separate steps for teachers, school administrators, and district administrators to apply the concepts described in Part One in their own school environments. In Part Two, "Leading Professional Development on Data-Driven Instruction," the author describes professional development activities designed to build and support the framework. Case studies are included throughout the book to illustrate successful applications of the data-driven instruction framework.

Marzano, R. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.

REL Southwest staff summary of book: In this book, Marzano outlines a framework for effective instruction that includes the use of effective instructional strategies, the use of effective management strategies, and the use of effective classroom curriculum design strategies. The book is a compilation of strategies and techniques the author included in his previous books *What Works in Schools*, *Classroom Instruction that Works*, *Classroom Management that Works*, and *Classroom Assessment and Grading that Work*. Going chapter by chapter, the author presents answers to 10 questions regarding successful instructional design. Chapter topics include establishing and communicating learning goals and tracking student progress, helping students interact with and deepen their understanding of new knowledge, engaging students and maintaining effective relationships with them, and developing lessons into cohesive units.

Marzano, R., & Brown, J. (2009). *A Handbook for the art and science of teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

REL Southwest staff summary of book: This handbook contains 25 modules designed to support the material presented in *The Art and Science of Teaching: A Comprehensive Framework for Effective Instruction*. The modules are divided into 10 chapters and address each of the design questions presented in the companion book. The materials can be used for self-study or incorporated into study teams. The author states that the materials in the handbook can be used with or without the companion book, although he encourages pairing the two so users of the handbook will be familiar with the research and theory that form the foundation for the recommendations presented.

Marzano, R., & Toth, M. (2013). *Teacher evaluation that makes a difference: A new model for teacher growth and student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

REL Southwest staff summary of book: In this book, the authors outline a model of teacher evaluation that incorporates multiple measures of teacher performance and student growth. The authors include information on the context of teacher evaluation reform, the skills and activities required for effective teaching, methods to collect data that are informative yet unobtrusive, different ways to report teacher status and growth, a hierarchical evaluation system for school and district leaders to support the teacher evaluation process, and how to use this system to create district-based processes for supporting teacher growth and development. In particular, the book highlights the need to increase teachers' participation in the evaluation process, improve the validity and reliability of student growth measures, improve the precision of observations of teachers in their classrooms, and incorporate improvement in teachers' pedagogical skills into the evaluation process.

Reeves, D. (2007). *Ahead of the curve: The power of assessments to transform teaching and learning*. Bloomington, IN: Solution Tree Press.

REL Southwest staff summary of report: This anthology contains 13 chapters, each written by a different author, covering different issues related to the use of assessment in the classroom. The book is divided into four sections—classroom assessment, system-level assessment, assessment challenges, and assessment leadership—with two or three chapters dedicated to each section. The goal is to provide a comprehensive overview of several of the challenges of assessment from both classroom and leadership standpoints.

ASK A REL is a service provided by a collaborative of the REL Program, funded by the U.S. Department of Education's Institute of Education Sciences (IES). This response was prepared under contract ED-IES-12-C-0012 with IES, by REL Southwest, administered by SEDL. The content does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.