Core Function: Curriculum and Instruction

Effective Practice — **Assess student learning frequently**

Overview: Frequently assessing student learning contributes positively to student performance outcomes. Frequent formative assessment provides regular information on whether students are learning as expected, and can allow teachers to adjust their teaching as necessary and provide differentiated instruction based on student learning needs. Benchmark assessments should be used at least three times per year to provide timely information to Instructional Teams on whether standards-aligned learning objectives are being met so that instruction can be modified as necessary. Data-based decision making requires easy access to a variety of student data, as well as professional development on how to analyze and use data and sufficient time for teachers to work collaboratively to use data to guide their instructional practice. Schools can create their own data systems or seek funding for more complex systems that better meet their needs.

Evaluate Your Practice: Does your school administer at least three benchmark assessments annually? Do all your teachers include frequent assessment of students' mastery in order to provide feedback to students and to adjust their instruction? How will leadership know that instructional decisions and differentiation are made based on relevant data? How quickly are test results provided to teachers? Have staff received adequate professional development to engage in data-driven instruction? What is the procedure for Instructional Teams to review assessment results and make immediate adjustments in instructional plans?

Introduction

Assessment is the process of testing (written, verbal, or by examination of work) to see what a student knows and can do and patterns of strength and weakness in what a group of students knows and can do (Walberg, 2007). Assessment within schools includes: 1) diagnostic-prescriptive assessments, such as unit pre- and post-tests, used by teachers and teams; 2) embedded assessments that are part of learning activities by which the teacher determines mastery of learning objectives; 3) periodic assessments, such as those provided by the district or school to gauge student mastery of standards-based objectives at several points throughout the school year (often called benchmark tests); and 4) annual assessments such as state standards assessments and standardized achievement tests (Redding, 2007). Danielson (2013) argues all of these forms of assessment are essential and that good teaching requires both assessment of learning (to ensure teachers and other stakeholders know that students are learning as intended) and assessment for learning (teachers incorporating assessments directly into the instructional process in order to modify or adapt instruction as needed to ensure student learning, often known as formative assessment).

Frequent assessment of student learning within schools has been shown to contribute to positive student outcomes across a variety of studies (e.g., Bangert-Drowns, Kulik, & Kulik, 1991; Hanover Research, 2014; Hattie & Timperley, 2007). School practices that facilitate frequent assessment of student learning are described below.

How often should schools and teachers assess students' progress towards mastery of standards-based objectives?

At the classroom level. Teachers use assessments continually within the classroom, ranging from informal (e.g., a show of hands to see how many can correctly answer a teacher question, or exit tickets to determine what students know and what they still need to learn), to more formal approaches such as frequent quizzes to review the previous day's learning and unit pre- and post-tests that measure progress towards learning objectives. These activities, often referred to as formative assessment, provide evidence of student learning that allows the teacher to adapt the

teaching work to meet student needs (Black, Harrison, Lee, Marshall, & Wiliam, 2004). Feedback of this sort has a powerful influence on achievement (Hattie, 2009) and should serve to both inform students and to give feedback to teachers "as to what students know, what they understand, where they make errors, when they have misconceptions, when they are not engaged" (p. 173). As teachers derive ongoing feedback from assessments they can modify their teaching as necessary and provide students with feedback so that they are able to self-regulate their learning and become motivated to engage in further learning (Hattie, 2012). Frequent assessment gives the teacher the information needed to differentiate instruction for each student or group of students. As Tomlinson (2009) describes:

Plans for differentiation stem from a teacher's ongoing collection of information that details each student's proximity to specified and essential knowledge, understanding, and skill that form curricular frameworks. A teacher who sees the central goals of teaching as ensuring that each student understands, applies, and transfers key content, uses pre-assessment and formative assessment as a sort of daily GPS to know how to steer instruction for individual students, small groups of students, and the class as a whole to achieve that goal. Formative assessment thus becomes a primary vehicle to guide teacher reflection on individual learners and to move them away from thinking only about "the class" as the unit of instruction. (p. 256)

At the school level. High achieving schools often use periodic benchmark assessments (at least three times per year) to track student progress and make adjustments as necessary (Olson, 2005). These assessments may be provided by testing companies or locally developed by teachers and schools. Herman, Osmundson, and Dietel (2010) describe the role of benchmark assessments within a balanced assessment system:

While annual state assessments provide a general indicator of how students are doing relative to annual learning standards, and while formative assessment is embedded in ongoing classroom instruction to inform immediate teaching and learning goals, benchmark assessments occupy a middle position strategically located and administered outside daily classroom use but inside the school and/or district curriculum. Often uniform in timing and content across classrooms and schools, benchmark assessment results can be ag-

gregated at the classroom, grade, school, and district levels to school and district decision-makers, as well as to teachers. This interim indication of how well students are learning can fuel action, where needed, and accelerate progress towards annual goals. (p. 2)

Some critics claim that when used within a high-stakes testing environment, benchmark assessments may contribute to "teaching to the test." Proponents of these assessments argue, however, that when used appropriately, they can provide specific feedback on academic areas where students need the most assistance (Coffey, 2009). When considering the use of benchmark assessment, schools should ensure that these assessments are well aligned with curriculum standards and provide teachers with frequent and timely information to guide their instruction. Timely information is crucial because the further away the time of assessment, the less relevant the results become (e.g., if students perform poorly on a benchmark assessment in September, receiving the results in December is too late to impact lesson planning and design (Doubet & Hockett, 2015). Schools should also assess the validity of benchmark assessments and provide adequate resources, including professional development and the necessary time for instructional planning to incorporate results (Herman et al., 2010).

How can schools ensure that teachers can easily access the student data they need to help guide instructional practice?

Schools must ensure that teachers and Instructional Teams have easy access to student data in order to allow for data-based decision making that informs instructional planning in a timely manner. Substantive use of data can improve the efficacy of school improvement teams and can improve the culture of professionalism within a school (Wayman & Stringfield, 2003). However, Wayman and Stringfield also point out that schools may be data-rich but information-poor if staff members cannot access the information they need to make data-driven instructional and school climate decisions. Often, the only data that teachers and instructional leaders can easily access are the scores that their students received on standardized tests, which typically provide little information to guide daily decision making in the classroom and school (Halverson, Grigg, Prichett, & Thomas, 2006; Means, Padilla, DeBarger, & Bakia, 2009; Wayman & Cho, 2008). While summative information on student learning is essential to guide instructional practice, many other types

of information are required, including guidance information (student placement and behavioral records), student demographics, classroom grades, master schedule and calendar information, curricular information, and technological capacity (Halverson et al., 2006). In addition to limited access, many teachers lack the skills needed to retrieve, analyze, and apply the data to instruction; with support and training of both teachers and administrators, staff will be more amenable to data-driven practice and will better see the value in using data to guide their work (Wayman & Cho, 2008). The support includes allotting sufficient time for teachers to work together in analyzing and understanding their students' data (Means et al., 2009). Other barriers to data integration and usage include failure to link databases together, poorly aligned information systems, and technological constraints (Herzog, Davis & Legters, 2012; Wayman & Cho, 2008).

Ideally, the systems created and managed by districts would meet all needs at the school level, but with competing priorities, the systems created by the district are more likely tailored to their own higher-level needs (Halverson et al., 2006; Heppen & Therriault, 2009). Most individual schools lack the time, expertise, or financial resources to create or purchase an integrated data warehouse for all of their data streams. However, there are ways to work around these limitations. Even without a database in the traditional sense, schools can create structures that will allow them to begin merging and tracking their data (Heppen & Therriault, 2009). For example, some schools have used Microsoft Excel, which often requires manual data entry and upkeep but is found on most computers and has easily accessible training resources. Spreadsheets created in Excel can be shared through a number of programs such as Google Drive or Dropbox, to ensure that all team members have access to the same data (Heppen & Therriault, 2009; Herzog et al., 2012). Schools teams should set schedules for updating data so that all members have access to the most current data in a timely manner, especially after assessments are given (Means et al., 2009; Herzog et al., 2012). Schools requiring more complex data systems can fund the purchase of a commercial system through federal funds such as Title I. Schools must consider privacy of student data, in accordance with the Family Educational Rights and Privacy Act (FERPA), and ensure that documents are password protected and only accessible by staff that need the information (Herzog et al., 2012).

Indicators to Support the Effective Practice
The school assesses each student at least 3 times each year to determine progress toward standards-based objectives.
The school provides all teachers timely reports of results from standardized and objectives-based assessments.
The school maintains a central database that includes each student's test scores, placement information, demographic information, attendance, behavior indicators, and other variables useful to teachers.
All teachers assess student progress frequently using a variety of evaluation methods and maintain a record of the results.

References

Bangert-Drowns, R. L., Kulik, J. A., & Kulik, C. C. (1991). Effects of frequent classroom testing. *Journal of Educational Research, 85*(2) 89–99.

Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the black box: Assessment for learning in the classroom. *Phi Delta Kappan, 86*(1), 8-21. Retrieved from http://journals.sagepub.com/doi/pdf/10.1177/003172170408600105

Coffey, H. (2009). *Benchmark assessments.* LEARN NC; University of North Carolina School of Education. Retrieved from http://www.learnnc.org/lp/pages/5317

Danielson, C. (2013). *The Framework for Teaching Evaluation Instrument.* Princeton, NJ: The Danielson Group. Retrieved from http://www.loccsd.ca/~div15/wp-content/uploads/2015/09/2013-framework-for-teaching-evaluation-instrument.pdf

Doubet, K. J., & Hockett, J. A. (2015). *Differentiation in middle and high school: Strategies to engage all learners.* Alexandria, VA: ASCD

Halverson, R., Grigg, J., Prichett, R., & Thomas, C. (2007). The new instructional leadership: Creating data-driven instructional systems in schools. *Journal of School Leadership, 17*(2), 159-194. Retrieved from https://www.researchgate.net/publication/228363590_The_new_instruction_leadership_Creating_data-driven_instructional_systems_in_schools

Hanover Research. (2014, August). The impact of formative assessment and learning intentions on student achievement. *District Administration Practice.* Retrieved from http://www.hanoverresearch.com/media/The-Impact-of-Formative-Assessment-and-Learning-Intentions-on-Student-Achievement.pdf

Hattie, J. (2009). *Visible learning*. Abingdon, UK: Routledge.

Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. New York, NY: Routledge.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81–112.

Heppen, J. B., & Therriault, S. B. (2009). *Developing early warning systems to identify potential high school dropouts.* National High School Center at the American Institutes for Research. Retrieved from https://eric.ed.gov/?id=ED521558

Herzog, L., Davis, M., & Legters, N. (2012). *Learning what it takes: An initial look at how schools are using early warning indicator data and collaborative response teams to keep all students on track to success.* Everyone Graduates Center. Retrieved from http://new.every1graduates.org/wp-content/uploads/2012/04/Learning_what_it_Takes.pdf

Herman, J. L., Osmundson, J. E., & Dietel, R. (2010). *Benchmark assessment for improved learning* (AACC Policy Brief). Los Angeles, CA: University of California. Retrieved from http://files.eric.ed.gov/fulltext/ED524108.pdf

Means, B., Padilla, C., DeBarger, A., & Bakia, M. (2009). *Implementing data-informed decision making in schools—Teacher access, supports, and use.* U.S. Department of Education Office of Planning, Evaluation, and Policy Development. Retrieved from https://eric.ed.gov/?id=ED504191

Olson, L. (2005, November 30). Benchmark assessments offer regular checkups on student achievement. *Education Week, 25*(13), 13–14. Retrieved from http://www.edweek.org/ew/articles/2005/11/30/13benchmark.h25.html

Redding, S. (2007). Systems for improved teaching and learning. In H. Walberg (Ed.), *Handbook on restructuring and substantial school improvement* (pp. 91–104). Lincoln, IL: Center on Innovation and Improvement. Retrieved from http://www.adi.org/about/downloads/Restructuring%20Handbook.pdf

Tomlinson, C. A. (2009). Differentiating instruction in response to academically diverse student populations. In R. Marzano (Ed.), *On excellence in teaching* (pp. 247-268). Bloomington, IN: Solution Tree Press.

Walberg, H. (2007). *Handbook on restructuring and substantial school improvement*. Lincoln, IL: Center on Innovation & Improvement. Retrieved from http://www.adi.org/about/downloads/Restructuring%20Handbook.pdf

Wayman, J. C., & Cho, V. (2008). Preparing educators to effectively use student data systems. In T. J. Kowalski & T. J. Lasley (Eds.), *Handbook on data-based decision-making in education* (pp. 89–104). New York, NY: Routledge. Retrieved from http://www.wayman-datause.com/wp-content/uploads/2013/11/Wayman_and_Cho.pdf

Wayman, J. C. & Stringfield, S. (2003). *Teacher-friendly options to improve teaching through student data analysis.* Baltimore, MD: Johns Hopkins University Center for Social Organization of Schools.