



## DATA-INFORMED DECISION-MAKING

*A Guidebook for Data Points and Analyses in the  
Context of Michigan School Improvement Framework*



*Produced by Michigan Coalition of Educational Leadership, A State Action  
Educational Leadership Project on Data-Informed Decision-Making  
Funded by The Wallace Foundation*

Based on Michigan Department of Education's  
Michigan School Improvement Framework





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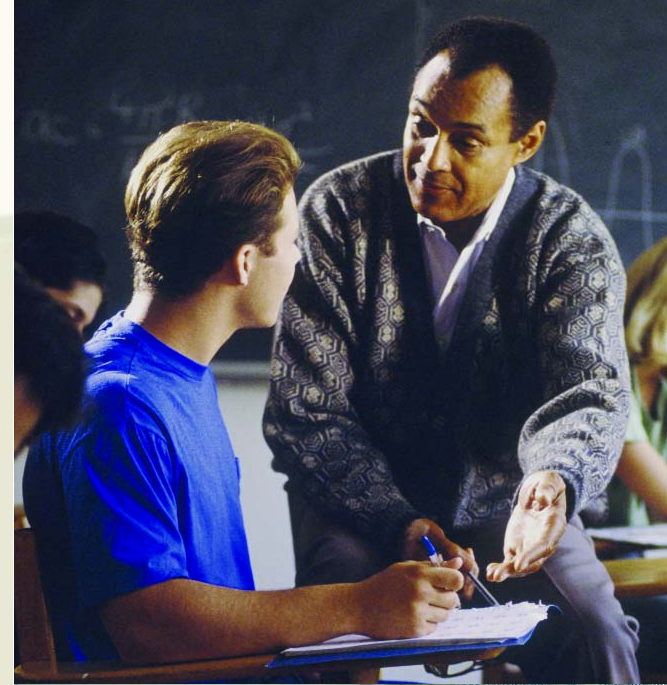
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## DATA-INFORMED DECISION-MAKING

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### *Introduction*

This document is developed to address the data needs embedded in the Michigan School Improvement Framework. We take the strands, standards and benchmarks from the framework, and develop two examples of data point and data analysis for each benchmark. The importance of data-informed decision-making is self-evident. This document is intended to provide concrete examples for educators. The document has the following characteristics to meet the needs from the field.

- *More summative than formative.* While the discussion questions in Michigan School Improvement Framework lead to more formative evaluation, the data source and the data analysis suggested in this document are more summative.
- *Decision-oriented.* The examples of data points and data analyses are decision-oriented. A decision could be made after each data analysis.
- *Need-based.* In a continuum from (a) an open-ended tool kit, to (b) an inquiry process, and to (c) a model of data points and analyses, we choose to focus on (c) because we feel it is important to provide concrete examples for principals and other school personnel. We feel that the approach we choose to take addresses an urgent need in the field.
- *Catering to a wide range of audience.* This document is intended for educators in various capacities. This document could also be used as a curriculum guide on data-informed decision-making by universities' educational leadership programs and professional associations' professional development.

The illustrated data points and data analyses are just examples. They are not intended to be definitive and exhaustive. There are many other appropriate data points and data analysis methods given the specific context. We welcome your feedback and suggestion as you use the document.





## Strand I: Teaching for Learning

### Standards and Benchmarks

#### Standard 1: Curriculum

**Benchmark A:** Curriculum Alignment, Reviewed, and Monitored

### Type of Data

District/school published curriculum guide

Scope and sequence documents from the written curriculum

**Benchmark B:** Curriculum Communicated

Schedules, agendas, and materials from professional development activities related to curriculum

Samples of communication with the parents related to curriculum

### Type of Analysis

Conduct a content analysis of the district/school curriculum in key subject areas, tally the results on the extent to which the grade-level content expectations are addressed by the district/school curriculum; the higher percentage the grade-level content expectations are covered, the higher level of curriculum alignment

Schematic and pictorial presentation of how the curriculum is aligned horizontally (across content areas at a grade level) and vertically (within a subject across the grade levels)

Counts of professional development activities on communicating curriculum within the last five years; themes of the content of these activities such as focusing on sharing and discussing the grade-level and course curriculum

Counts of communications with parents on curriculum within the last five years; themes of the content of the communications such as announcement of the content schedule and suggested activities to help students to be successful

### Standards and Benchmarks

#### Standard 2: Instruction

**Benchmark A:** Planning

### Type of Data

Samples of lesson plans (over a significant period of time, e.g., one marking period)

Schedules, agendas, and materials from professional development activities related to instruction

**Benchmark B:** Delivery

MEAP data at the item and theme levels

Classroom observation data

#### Standard 3: Assessment

**Benchmark A:** Aligned to Curriculum and Instruction

Samples of assessment instruments

Samples of assessment instruments

**Benchmark B:** Data Report and Use

Schedule for reporting assessment results

Interview data and artifacts on data utilization

List of sources of assessment data

### Type of Analysis

For each key subject area, conduct a content analysis of the lesson plans to inquire into the extent to which grade-level content expectations are covered in one marking period; the higher the percentage, the more alignment between the adopted curriculum and the curriculum taught

Counts of instruction-related opportunities/activities (such as team common planning time, learning community) to discuss the content and developmental appropriateness so as to improve teaching; themes of these activities such as common assessment and effective strategies for teaching a concept

Conduct an analysis of student performance at the item and theme levels; if the content is covered in the lesson plans, the lower percentage of students get the items or themes correct, the greater the chance there is an issue of instructional delivery

Use classroom observation instruments (such as the one based on What Works in Classrooms or the one designated by the school district) and tally the results to ascertain teachers' effectiveness in delivery

Conduct a content analysis of the instruments to test the alignment between curriculum/instruction and assessment, the higher percentage of the curriculum content covered in the assessment tools, the higher the content validity

Tabulate the reliabilities and validities of the assessment instruments

Tabulate the time it takes to get the assessment results to the teachers, students, and parents

Synthesize the interview data and artifacts on data utilization to find out patterns related to how data inform curriculum and instruction

Create a diagram to (a) illustrate the degree of coherence among various assessments, and to (b) identify other kinds of data that need to be collected or certain assessments that overlap and should be dropped





## Strand II: Leadership

### Standards and Benchmarks

#### *Standard 1: Instructional Leadership*

**Benchmark A:** Educational Program

### Type of Data

Annual School Report and School Improvement Plan

Documents related to planning, implementing, revising, and evaluating educational programs, such as an at-risk program (report cards, marking period grades, and drop-out data, etc.)

### Type of Analysis

Conduct an analysis of the documents to compile evidence of the school leaders' knowledge of student and adult learning, curriculum, instruction, assessment, technology, and use of data to identify and respond to achievement gaps

Analyze the documents to determine the extent to which school leaders applied knowledge of the educational program to act as a catalyst for change with a focus on student results

Analyze the records to identify how school leaders communicate expectations, monitor curriculum progress, identify gaps in curriculum and delivery, and enhance instruction

Conduct an annual review of the records to identify how much time was allocated for teachers, grade level groups, or departments to collaboratively communicate about teaching and learning and examine best practices

**Benchmark B:** Instructional Support

Records of classroom walkabouts, other observation strategies, and follow-up meetings with teachers

Records of intra- and inter-departmental, or grade-level meetings, preparation time, common preparation time, teacher professional days, in-service and faculty meeting agendas

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### Standards and Benchmarks

#### *Standard 2: Shared Leadership*

**Benchmark A:** School Culture and Climate

### Type of Data

Audit or survey data of school culture and climate (such as the NASSP School Climate Survey)

School culture and climate survey results, school incident data (suspensions, expulsions, nature of disciplinary referrals, etc.)

### Type of Analysis

Conduct an analysis of school culture and climate survey results to assess the perception of various stakeholder groups that the staff has created a learning environment that is safe, orderly, inclusive, and equitable

Conduct annual audit of incident data and disciplinary referrals to determine the extent to which incidents and infractions result in subsequent disciplinary action. Conduct a discrepancy analysis between the perceptions of the school learning environment and actual incident data and disciplinary actions

**Benchmark B:** Continuous Improvement

School Improvement Plans

School mission statement, goals, action plan, and communication documents, e.g., Teacher Handbook, school newsletters, etc.

Conduct a content analysis of three most recent, consecutive years of school improvement plans to look for evidence that the plans articulated a shared vision and mission, were results-focused, implemented and monitored, and that there was year-to-year continuation

Analyze the documents to locate evidence that: (a) the mission is clearly defined and integrated into all aspects of the school; (b) communication documents reflect and support school goals and mission as well as clarify the expectations and appropriate behavior of students; (c) the use of school resources is aligned with school goals and mission, with a focus on ensuring equity in student outcomes; and (d) professional development and support systems are linked to meeting school goals and mission

#### *Standard 3: Operational and Resource Management*

**Benchmark A:** Resource Allocation

Annual school budget

School improvement plan, master schedule including common planning time assignments and room allocations

Conduct a line item analysis of the school budget by department, grade levels, or individuals with a particular focus on allocations for equipment, materials, and professional development to determine the degree to which fiscal resources provide equitable support for teaching and learning needs across the curriculum

Conduct a content analysis to learn how human resources, time and space are allocated to support each of the improvement goals established by the school

**Benchmark B:** Operational Management

School policy handbooks for parents, students and staff

MDE School Infrastructure Database (SID) report, assurance of compliance statements (SID and compliance data are usually collected by a central office administrator for each building and submitted to the Michigan Department of Education), similar school or district reports

Conduct an annual audit of school policy handbooks to review the extent to which handbooks align with the requirements outlined in the Board Bylaws and Policies, Administrative Guidelines, and district Procedures and Forms (electronic versions are generally available for download)

Conduct an annual review of these materials to learn the degree to which the school meets all required state and federal regulations and building maintenance standards



## Strand III: Personnel & Professional Development

### Standards and Benchmarks

#### *Standard 1: Personnel Qualifications*

##### **Benchmark A:** Requirements

Teaching assignments, professional certificates, endorsements, and licenses for school staff

Copies of recruitment and selection materials and procedures for filling professional staff positions (job descriptions, reference checks, criminal background checks, etc.)

##### **Benchmark B:** Skills, Knowledge and Dispositions

Teacher evaluation data related to content knowledge, communication skills, classroom management, and technology utilization for instruction; student scores on state standardized tests

In-service schedule for school; mentoring programs for new teachers; collaboration time built into teacher schedules

### Type of Data

### Type of Analysis

Tally to show the percentage of professional staff that holds state-mandated levels of certification, licenses, and endorsements for the positions held and meet the Highly Qualified standards for NCLB

Analyze to determine how school leaders assure that all staff possess the qualifications, knowledge and skills needed to support student learning

Tally to show the percentage of professional staff that holds state-mandated levels of certification, licenses, and endorsements for the positions held and meet the Highly Qualified standards for NCLB.

Analyze the data to determine ways staff collaborate on student learning and support new teachers in the school

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### Standards and Benchmarks

#### *Standard 2: Professional Development*

##### **Benchmark A:** Collaboration

### Type of Data

District professional development policies and records of professional development activities over the past school year

Professional development policies, sample records of professional development activities and sample teacher development plans over a three-year period

##### **Benchmark B:** Content and Pedagogy

Artifacts (agendas, handout material, etc.) from formal professional development activities over one school year and participant evaluation summaries for each activity

Interviews with a sample of new teachers, supervising teachers and other mentors, and administrators; survey feedback from teachers and supervisors in new teacher programs

##### **Benchmark C:** Alignment

Professional development need assessment survey results, professional development sections from school improvement plan including a schedule of activities over one school year, school improvement goals

Artifacts (descriptions, agendas, handout materials, etc.) from professional development activities over one school year

### Type of Analysis

Examine policies and resultant activities and products to determine the degree to which they demonstrate that teacher professional learning is conducted with colleagues across the school/district to improve staff practices and student achievement

Conduct a content analysis for evidence that policy and practice emphasize sustained approaches to teacher learning that impact instruction in relation to student performance results

Code each activity by topic and create a frequency distribution to show the degree to which deeper content understanding is a goal for professional learning in the school. Analyze teacher evaluations to assess perceptions regarding how learning actually deepens content understanding

Conduct a qualitative analysis of interview data and an item analysis of survey results to learn the degree to which new teachers are supported in ways that help them succeed

Create a graphic representation to examine the relationships among school improvement goals, student learning needs, teacher learning needs and professional development plans. Analyze the graphic to determine the degree to which these areas are aligned

Analyze the activities to determine the degree to which they provide opportunities for professional learning embedded in daily work, encourage colleagues to observe one another and provide feedback, or provide for guided practice in the classroom setting





## Strand IV: School & Community Relations

### Standards and Benchmarks

#### Standard 1: Parent/Family Involvement

##### Benchmark A: Communication

District and or school homework policy and samples of actual homework assigned to students in a particular content area over one marking period

Samples of written forms of communication from teachers and the school sent to parents/families over one school year

##### Benchmark B: Engagement

Lists of names and demographic information for parent representatives on committees such as school/district advisory groups, school improvement teams, Title I councils, and parent-teacher organizations

Artifacts and oral history of events related to a recent policy decision made at the school/district level with direct implications for students and/or parents (attendance policy, dress code, curriculum adoption/change, etc.)

### Type of Data

### Type of Analysis

Conduct a content analysis to explore the degree to which homework policy and practice encourage parental involvement in ways that help the student be successful

Organize the samples by grade level and core curriculum content area and analyze the communications to assess the nature and amount of guidance provided for ways parents can be meaningfully involved in their child's education (establishing a quiet time and place for homework, asking about school, reading to or listening to a child read, visiting the library, etc.)

Organize the data in a matrix by name and demographics and another matrix by name and advisory group. Analyze the matrices to learn about the scope of parental participation in decision making/governance groups and the degree to which the representatives reflect the diverse populations, neighborhoods and interest groups in the school community

Conduct a case study analysis to inquire into the nature and extent of parental involvement in the decision making process and the degree to which the parent representatives communicated with other parents to obtain input and report results

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### Standards and Benchmarks

#### Standard 2: Community Involvement

##### Benchmark A: Communication

### Type of Data

School communication samples that targeted the community over the last year (public relations efforts, announcements, annual reports, etc.)

School communication samples that targeted the community over the last year

##### Benchmark B: Engagement

Demographic information from school records and recent U.S. Census Bureau Fact Sheets <http://www.census.gov/main/www/cen2000.html>

Printed materials, directories, lists, publications and documentary materials from the business community, local educational institutions and community agencies

### Type of Analysis

Organize the samples by month and form of communication (newspaper, newsletters, mail, phone messages, podcasts, radio/TV, World Wide Web, etc.) Analyze the data to assess the nature of the message(s), regularity of communication and the variety of communication tools utilized

Use content analysis to explore how the communication system addresses diversity issues and reaches out to people with a stake in quality education even though they do not have children in school

Conduct a need assessment based on characteristics and trends evident in the school community (trends in the numbers of single parent households, for example). Analyze the extent to which business, educational and community agencies are collaborating with the school to meet high priority needs

Inventory the data/information sources to determine the educational interests of the identified civic, cultural, economic, fraternal, governmental, patriotic, political, professional, religious, retired groups, and welfare or other community youth organizations and their potential for career awareness, resource sharing and/or extending learning opportunities for students. Conduct a gap analysis to inquire into the extent to which the school system is currently engaged in cooperative activities with identified groups and organizations or may not be taking advantage of potentially valuable resources for assisting in the education of children





## Strand V: Data & Information Management

### Standards and Benchmarks

#### Standard 1: Data Management

**Benchmark A:** Data Generation, Identification, and Collection

### Type of Data

Inventory of all types of data collected and used to develop the school improvement plan

Inventory of all types of data collected and used to develop the school improvement plan

### Type of Analysis

Organize the data in a table by type: demographics (such as student demographics and community background), process (such as schooling activities), outcome (such as MEAP and other assessments), and perception (such as parental survey); analyze the table to assess the data collection process in general and the degree to which the school uses different types of data of high technical quality from multiple sources to inform decisions

Code each data type to identify how it was used (identify strengths and challenges, develop strategies, assess who is or is not learning and why, assess effectiveness of strategies, etc.) and display the results in a matrix. Examine how the school uses data in the planning process and integrates multiple sources to inform decision such as the interaction of race and outcome data to make decisions on whether certain groups of students tend to outperform or underperform

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### Standards and Benchmarks

#### Standard 1: Data Management (cont.)

**Benchmark B:** Data Accessibility

### Type of Data

Samples of routine reports to parents; formative and summative reports made available to teachers and the time line for distribution of these reports during the school year

Copies of policies, procedures, and protocols related to how parents, teachers and administrators request and receive data and information

**Benchmark C:** Data Support

Samples of reports from the school and district data management system provided to parents, teachers and administrators

Agendas and other materials from school improvement committee meetings and faculty meetings held over one school year

#### Standard 2: Information Management

**Benchmark A:** Analysis and Interpretation

Interviews and artifacts (meeting agendas, handout materials, minutes, etc.) needed to reconstruct the process used to analyze the most recent MEAP data available to the school

Interviews and artifacts (meeting agendas, handout materials, minutes, etc.) needed to reconstruct the process used to analyze the most recent MEAP data available to the school

**Benchmark B:** Applications

School Annual Report, NCLB Report Card, and any similar reports or documents disseminated to the public

School improvement plan and interviews with key members of the school improvement team focused on the use of data in the planning process

### Type of Analysis

Analyze the stream of information to determine the degree to which data are readily accessible to parents and teachers and allow them to monitor progress and make timely instructional decisions

Analyze the documents to assess how the school and district provide access to data when it is needed while maintaining security and ensuring it is available only to authorized users

Critically examine the reports to judge how well the data are organized, summarized and formatted to facilitate analysis and the extent to which the data show comparison across groups and over time

Conduct a content analysis of the historical materials to learn how and the degree to which opportunities were provided for the collaborative analysis of data

Use a case study method to analyze how well the data help staff make comparisons across groups and over time, and to assess the methods used to examine the data, including aggregation and disaggregation

Expand the case study above to explore what groups (parents, teachers, community members, etc.) participate in dialogue about the meaning of data, how people create meaning from the data, and how they decide what action is implied.

Review the documents to learn how the school shares what it has learned from data analysis and interpretation in ways that build support for the teaching and learning decisions that have been made based on the data

Analyze the school improvement planning process with an eye toward learning how information derived from data was used to evaluate program effects and determine action at the school and classroom levels



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