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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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 points 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 audiences. 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 suggestions 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
- 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 the percentage of the grade-level content expectations are covered, the higher the 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

Benchmark B: Curriculum Communicated

Type of Data
- MEAP data at the item and theme levels
- Classroom observation data

Type of Analysis
- Conduct an analysis of the instruments to test the alignment between curriculum/instruction and assessment, the higher the percentage of the curriculum content covered in the assessment tools, the higher the content validity
- Tabulates the reliabilities and validities of the assessment instruments

Benchmark B: Data Report and Use

Type of Data
- Samples of assessment instruments
- Schedule for reporting assessment results
- Interview data and artifacts on data utilization
- List of sources of assessment data

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

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

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 plan, the lower the 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 designed by the school district) and tally the results to ascertain teachers' effectiveness in delivery

Benchmark B: Delivery

Type of Data
- Samples of assessment instruments

Type of Analysis
- 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
- Tabulates the reliabilities and validities of the assessment instruments
- Conduct an analysis of student performance at the item and theme levels, if the content is covered in the lesson plan, the lower the 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 designed by the school district) and tally the results to ascertain teachers' effectiveness in delivery

Benchmark B: Data Report and Use
## Strand II: Leadership

### Standards and Benchmarks

**Standard 1: Instructional Leadership**

**Benchmark A:** Educational Program

- Analyze the documents to determine how school leaders communicate expectations, monitor curriculum, progress, identify gaps in curriculum and delivery, and enhance instruction.

- Analyze 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 collaborative days, in-service and faculty meeting agendas.

### Type of Data

**Annual School Report and School Improvement Plan**

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

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

Conduct an annual review of these materials to collaboratively communicate about teaching and learning and examine best practices.

### Type of Analysis

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

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.

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

Analyze the documents to locate evidence that: (a) the mission is clearly defined and integrated into all aspects of the school; (b) school leaders communicate expectations, monitor curriculum, progress, identify gaps in curriculum and delivery, and enhance instruction; (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.

### Benchmark B: Continuous Improvement

- Strand II: Leadership

### Standards and Benchmarks

**Standard 2: Shared Leadership**

**Benchmark A:** School Culture and Climate

- 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.

- Conduct an analysis of the 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.

### Type of Data

**School Improvement Plans**

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

### Type of Analysis

**Conduct an 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 actualincident data and disciplinary actions.

### Benchmark B: Continuous Improvement

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

### Benchmark A: Resource Allocation

- School policy handbooks for parents, students, and staff

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).

### Type of Data

**Annual school budget**

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.

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

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.

### Type of Analysis

**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.

**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**
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.)
- 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

**Benchmark B: Skills, Knowledge and Dispositions**
- Professional development policies, sample records of professional development activities and sample teacher development plans over a three-year period
- 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
- 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
- Professional development policies, sample records of professional development activities and sample teacher development plans over a three-year period
- 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
- Create a graphic representation to examine the relationships among school improvement goals, student learning needs, teacher learning needs and professional development plans. Analyze the graph to determine the degree to which these areas are aligned
- 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
- Conduct a content analysis 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

**Standard 2: Professional Development**

**Benchmark A: Collaboration**
- Professional development policies, sample records of professional development activities and sample teacher development plans over a three-year period
- 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 B: Content and Pedagogy**
- 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

**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 Data**
- 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.)
- 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 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 the data to determine ways staff collaborate on student learning and support new teachers in the school

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

**Type of Analysis**
- Examines 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
- Create a graphic representation to examine the relationships among school improvement goals, student learning needs, teacher learning needs and professional development plans. Analyze the graph to determine the degree to which these areas are aligned
- 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
- Conduct a content analysis 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

Type of Data

- 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
- 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.)

Benchmark B: Engagement

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 students be successful
- Organizes the samples by grade level and core curriculum content area and analyzes 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.)
- Organizes 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


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
- Demographic information from school records and recent U.S. Census Bureau Fact Sheets

Type of Analysis

- Organizes 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
**Standards and Benchmarks**

**Standard 1: Data Management**

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

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

**Benchmark B:** Data Accessibility

- 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

**Benchmark C:** Data Support

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

**Benchmark D:** Data Accessibility (cont.)

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

**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

**Benchmark B:** Applications

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

**Benchmark C:** Data Support

- 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 Data**

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

- 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 decisions.

**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

- 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

- 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.