DEPARTMENT OF EDUCATION

# COMPASS: Data and Assessment Literacy for Teaching and Learning

Vision, Purpose, Goals and Implementation Plan

November 2021

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# Introduction

Collaborative Minnesota Partnerships to Advance Student Success, COMPASS, is a statewide education collaboration between the Minnesota Department of Education (MDE), Minnesota Service Cooperatives and Regional Centers for Excellence. COMPASS is designed to meet schools and districts where they are in the work to accelerate student learning and match the state's response to those needs. Throughout the 2021-22 school year and beyond, educators, school staff and school leaders will have new opportunities for professional learning and coaching, along with coordinated support from experts.

COMPASS will offer support for schools in the areas of Literacy, Math and School Climate and Mental Health using the Minnesota Multi-Tiered System of Support (MnMTSS) framework with a focus on data and assessment literacy and evidence-based practices. This document will provide educators with information on data and assessment literacy that will serve as a foundation as they begin their journey with COMPASS.

## Vision

The data and assessment literacy initiative seeks to support educators and school leaders in their journey to use data across all levels of the system (classroom, school, district and state) to make decisions. This support is designed to prevent data from feeling overwhelming, so data can be used as a powerful tool to continuously improve teaching and learning for all Minnesota students.

## Mission

Optimize the Minnesota Department of Education's (MDE) ability to provide data and assessment literacy professional learning and resources to interested districts and schools working to accelerate student learning led by evidence, via the COMPASS initiative.

## Goal and Objectives

### Goal

Increase educators' and leaders' confidence in using data and assessment to guide culturally responsive instruction and decisions by applying a critical equity lens to the knowledge and skills needed for educator data use and providing resources that can be used and adapted within a school or district's local context.

### Objectives

1. Provide a series of asynchronous (online) learning modules that focus on systems thinking, building capacity for evidence-based conversations, purposes and uses of assessments, understanding and interpreting data, and using data to inform instructional actions. These modules will provide flexible learning opportunities for teachers, administrators and school leaders. Embedded within these modules are the knowledge and skills for educators and leaders to increase their assessment and data literacy.

2. Provide additional tools (slides, planning templates, guides, etc.) accompanying each module that can be downloaded and adapted for use district-wide, school-wide, and/or in professional learning community (PLC) groups or other teams as needed.
3. Provide a conceptual framework for districts and schools for data and assessment literacy that can be applied in practice by educators and school leaders within their school context or can be used to develop additional professional learning with their staff.
4. Launch a data and assessment literacy cohort of interested district teams to engage in this work long-term.

## Application of MnMTSS

These resources and guidance are intended to be used within Minnesota's Multi-Tiered System of Supports (MnMTSS), within a continuous improvement framework and will be used in professional learning for district staff engaging in Minnesota's COMPASS supports. The resources and guidance outlined in this document are an application of components four and five, Assessment and Data-based Decision Making, respectively.

**Table 1: Outline of Resources, more details in Pathways section and Appendix B**

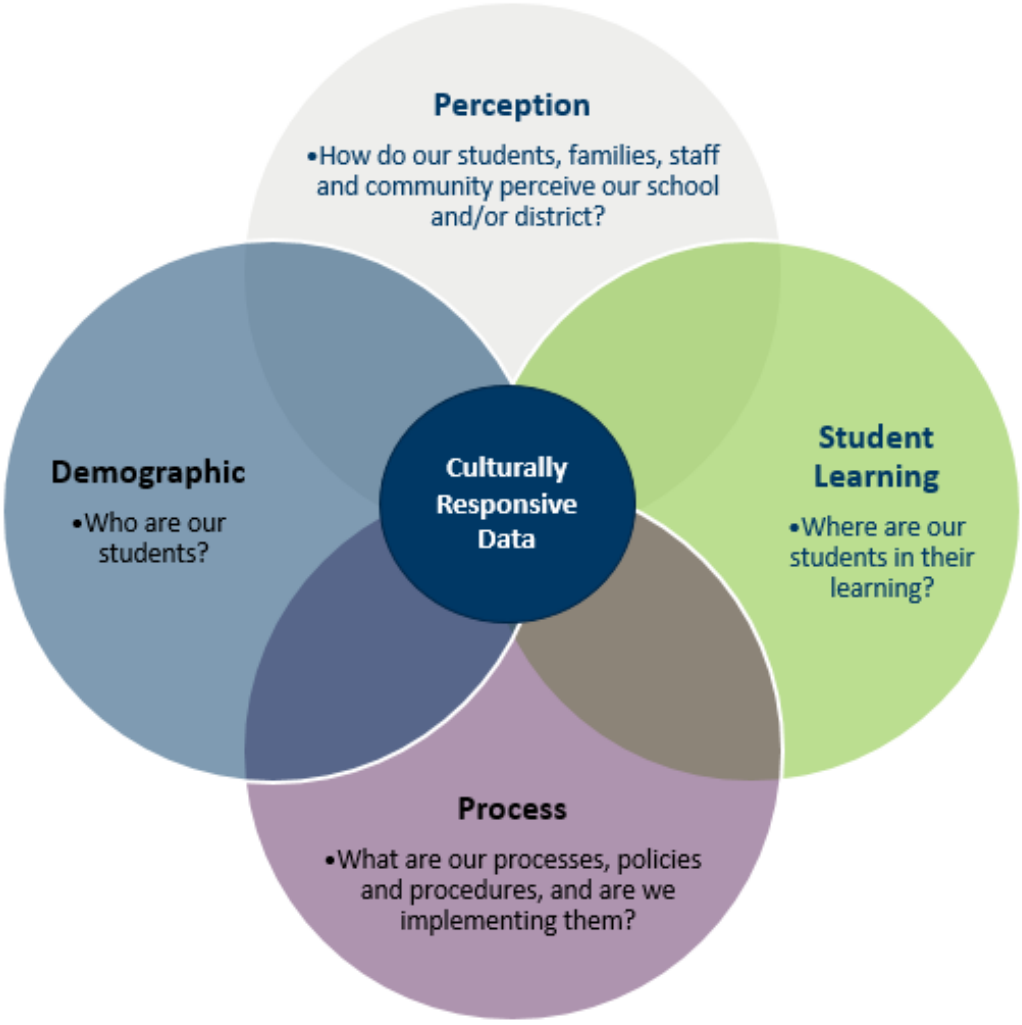
| Resource | Audience | Timeline |
|---|---|---|
| Data and Assessment Literacy for Teaching and Learning Overview | Teachers, school and district leaders | Fall 2021 |
| Data and Assessment Literacy Modules, Live Webinars and Customizable Tools | Teachers, principals and instructional leaders | Winter –Spring 2022 |
| Data and Assessment Literacy Toolkit for Educators | Teachers, principals and instructional leaders | Spring 2022 |
| Data and Assessment Literacy Toolkit for School Leaders | Principals or school- leaders engaged in continuous improvement work | Summer 2022 |
| Data Literacy Guidance for Decision-Making | District leaders engaged in continuous improvement work | Summer 2022 |
| Guidebook for Understanding Assessments | Teachers, instructional staff, school and district leaders | Summer 2022 |

## Approach

The data and assessment literacy plan applies an equity lens to the process of using data with the goal of making decisions that lead to more culturally responsive instructional practices and better outcomes for all students.

### Centering Equity through Data Use

Applying an equity lens to the knowledge and skills needed for educator data use is not a single, peripheral step. Rather, it is an ongoing process at the beginning of each phase in the data and assessment literacy guidance. Each phase is an opportunity for centering equity within data use, as well as an opportunity to discuss challenges and considerations for improving systems to facilitate this work (Hawn Nelson, A., et al, 2020).




### Assets-based Approach for Data Use

Student outcomes and student learning data is important for certain decisions, but understanding and using additional data like demographics, perceptions and process data to probe further for root causes can help explain why inequities in student outcomes persist. Demographic and perception data can support a better

understanding of who students are and what they value, along with their strengths and interests. The use of perceptions data in data analysis can give insight into students' and educators' sense of belonging, as well as physical and emotional safety. Data representing student learning outcomes therefore must be balanced with robust classroom-level data including student demographics and perceptions to support meaningful data inquiry processes that continuously inform decisions that are culturally responsive.

Process data is information about policies and procedures, including how they are implemented. This type of data can help shift data-based conversations to the systems and structures in place that either facilitate or inhibit the process of learning. Using process data attempts to avoid narrowly focused discussions on student outcomes, or the endpoints of learning, and reframe the discussion to potential changes that can be made within the educator- or leader's control. This is important for teachers making decisions about instruction and leaders making decisions like policies for coursework and program placement. A lack of proficiency in culturally responsive data literacy can limit the capacity of educators and leaders, as their own backgrounds or experiences can hinder them from identifying biases or inequities in their local systems or structures that can act as barriers to informing culturally responsive decisions. For example, a lack of proficiency in culturally responsive data literacy can influence biases into decisions about which students have access to more rigorous courses and which students are in need of interventions (Bocala & Boudett, 2015).

Learning how to ask critical questions of data and even what questions to ask in order to notice inequities can be challenging, as this may not come naturally to teachers (Dodman, S.L. et. al., 2019). The data use cycle proposed in the second half of this guidance can be used to guide teachers through a collaborative inquiry process that supports a shared understanding of data to generate actionable next steps.

### Guiding Principles

In summary, the following principles underpin the goal and objectives of the data and assessment literacy initiative:

- A belief that all students can and want to learn, all educators want their students to excel, and all families want a high quality learning experience for their child.
- A collaborative data use culture is grounded in decisions led by evidence to support success for all students.
- An asset-based approach to data use can improve, elevate and sustain practices that work in service of student learning.
- Adults learn best when knowledge can be adapted and integrated within their local practice and context.

## Four-Phased Organization and Design

The data and assessment literacy guidance is organized into four phases. Each phase contains a sequence of key steps which will guide the professional learning linked to each phase for educators and school leaders. Objectives that further describe the educator and leader knowledge, skills and dispositions embedded within each phase will be explicitly identified through the modules and resources as they become available.

The phases summarize what we know from the research literature about effective data and assessment use, how adults and students learn, effective professional learning and critical understandings. The four phases are:

- Planning for collaborative data use.
- Building assessment literacy.
- Understanding and accessing high quality data.
- Transforming data into information and instructional action.
  (Mandinach & Gummer, 2016; Boudett, 2018; Wiliam, Brookhart, McTighe, & Stiggins, 2019)

## Phase 1: Planning for collaborative data use

Effective data use must be grounded in beliefs of the importance of data use, a positive collaborative culture, structured learning supports, and supportive leadership. Establishing structures and supports that build a collaborative data use culture and a clear vision for data use school- and/or district-wide is critical to the success of a district- or school-wide data and assessment literacy initiative.

Additionally, professional learning that connects to deepen educators' pedagogical content knowledge is critical to support core instructional practices (Shulman, 1986). In other words, in order for professional learning to improve student learning at scale, it must be contextualized through the complex work of teaching and learning. The critical skills and knowledge needed for effective data use must be presented in a way that facilitates integration with classroom knowledge, content, and pedagogy (Shulman,1986, 1987; Mandinach & Gummer, 2016). Assessment and data should thus be coherently linked through a common model of learning used at each district or school, and aligned to the Minnesota K-12 Academic Standards.

In order for teachers to effectively translate data into instructional actions, student learning data must be presented and used within the context of the teacher's subject domain and learning progressions. This supports educators in understanding what the data means in reference to learning objectives and determining next steps for instructional planning (Mandinach & Gummer, 2016).

Equity-centered questions to guide thinking and planning throughout this phase (Hawn Nelson, A., et al, 2020):

- How will school and/or community expertise be forefront throughout data use?
- What capacity will need to be developed to ensure that this occurs?
- How will data use help school communities interrogate systems, rather than just inform how to "treat" communities with additional services and programs?

### Steps to be included in trainings:

1. Adopt a continuous improvement process (MnMTSS)*
2. Build a system of teams (MnMTSS Component 5.2.1)*
3. Prioritize and calendar time in teacher and team member's schedules (MnMTSS Component 1.2)*
4. Set clear expectations and norms for meetings (MnMTSS Component 1.6)
5. Review, revise, or create a data inventory
6. Create an inventory of culturally responsive instructional practices
7. Develop a shared vocabulary
8. Develop and maintain a district or school wide data system (MnMTSS Component 5.1)*
9. Revisit or revise the goals for continuous improvement*

**Indicates selected topics for school and/or district leaders only to be addressed in summer 2022 training.*

## Phase 2: Build assessment literacy

Assessment literacy is a necessary pre-requisite of data literacy for educators. In other words, neither assessment nor data literacy happens in isolation in teaching and learning, and therefore guidance for learning and implementation should attempt to take both into consideration. To support development of educators and leaders who are continually expected to use and understand a variety of different types of data, it is critical to consider assessment literacy as a component of becoming a data literate educator.

The proliferation of assessment data and appetite for information about student learning during the pandemic has caused many districts to take a closer look at their assessment systems to explore the coherence, balance and specificity of information produced (Brookhart, et al., 2019). It is critical for educators and school leaders to be proficient in foundational knowledge of the intended purpose and use of all assessments their students take, from classroom to standardized assessments, in order to feel more confident in using the results to guide instructional decisions (Datnow & Hubbard, 2015; Boudett, 2018; Mandinach & Gummer, 2016; Popham, 2009).

Systems of assessment operate across multiple levels of the educational system from the classroom up to the state level. In assessment systems, teachers are positioned within smaller systems that require different types of assessment processes resulting in more specific information about individual learners, but are still impacted by the broader system-wide assessments like the end of year state assessments. For this reason, it is critical that districts strive for as much coherence as possible across the multiple levels so that one component of an assessment system does not distort the balance or coherence with the others (Marion et al, 2019).

Educators and school leaders should be able to determine and justify which assessments are included in their district, school, or classroom assessment systems. This allows educators to make inferences and support claims about student learning related to the Minnesota K-12 Academic Standards and to ensure multiple opportunities, using multiple formats, for students to demonstrate their knowledge and skills of the standards.

In addition to a common understanding of the purpose(s) of the assessment system, all stakeholders need to understand the district's model of student learning which is reflected in the district's curriculum. Each assessment within the system should link to the curriculum in order to provide information about student learning and progress over time (Marion et al, 2019).

Stiggins (1991) identified questions that point to the assessment literacy needs of educators that are still relevant today:

- What does this assessment tell students about the achievement outcomes we value?
- What is likely to be the effect of this assessment on students?

Additional questions that should be added to the assessment literacy needs of educators and school leaders relative to classroom and school assessment systems and will guide the training opportunities outlined in this phase are:

- To what extent does the classroom, school and district assessment system align with the enacted curriculum?
- What does the classroom, school and district assessment system tell us about the instruction of the content standards and curriculum (*coherence*)?

- To what degree does the assessment system provide multiple measures and approaches for students to demonstrate their learning (*comprehensiveness*)?
- How does the assessment system demonstrate student learning over time (*continuity*)?
- To what extent do the assessments in the classroom/school assessment system provide information for multiple and diverse purposes (feedback, self-assessment, peer-assessment, revision, grades) (*utility*)?
- What does the assessment system indicate about the balance between instruction and assessment (efficiency)?
- To what extent are the classroom assessments high-quality and worth administering to students?

Additional equity-centered questions to guide thinking throughout this phase (Hawn Nelson, A., et al, 2020):

- Why is this assessment necessary?
- Who does the assessment benefit?
- How does it benefit the school/district community at large?
- Who can the process/product harm?

### Steps to be included in trainings:

1. Review the skills measured by each assessment students take, and understand how they are assessed and aligned to the academic standards and district's chosen model of learning.
2. Understand the purposes and uses of assessments within a balanced and comprehensive assessment system (including standardized, district, and classroom assessments), and evaluate the collection of classroom or district's assessments to ensure a high-quality system.
3. Design, choose and use a variety of formative and summative assessment types for various uses.
4. Understand how to evaluate the rigor of an assessment according to higher-order thinking and grade-level standards for learning.
5. Set and communicate clear success criteria (scoring, rubrics) and involve students as active agents in the process of feedback, goal setting and evaluation.
6. Understand how results are scored, interpreted, reported, and used for each assessment type to guide decisions to improve teaching and learning.
7. Implement grading practices and policies that reflect accurate, consistent, meaningful grades in support of learning.
8. Accurately report and communicate results from assessments with families based on the type, design, and purpose of the assessment. (MnMTSS Component 2.3)

## Phase 3: Understand and access high quality data for decision-driven data use

The process of data inquiry is essential to building trust and collaborative understanding of what the data means within a local context. We know information gained from collaborative data inquiry processes can be translated more seamlessly into instructional decisions (Boudett, 2018; Mandinach & Gummer, 2016), thus a framework for collaborative data inquiry will be used in Phase 3 and 4 to model the process for embedding critical data literacy knowledge and skills needed for educators and leaders within a conceptual framework.

Data use across the last decade has been dominated by accountability measures, which has caused incomplete information and/or deficit-based models of thinking to emerge that sometimes focuses on what's missing or "holes" in student learning. No single data point can paint a complete picture of a student or what's happening in schools. Context is needed to make meaning of the data and make sense of it. Additionally, using a variety of data types can help move the dialogue from a deficit-based framing that focuses on weaknesses or what's missing, to an asset-based framing that builds bridges for students based on strengths, cultures, and contextual backgrounds, thus painting a more comprehensive picture of each student (Data Quality Campaign, 2020; Hawn Nelson, A., et al, 2020).

Before data can be used to guide decisions or inform actions, it is important to step back and think critically about what questions are important to ask. Rather than the traditional "data-driven decisions" model, Dylan Wiliam calls this "decision-driven data collection." In other words, in order to ensure the actions guided by information are leading to improved outcomes, the data should be framed by a focus or a decisional question. This question is critical to develop as it guides the data gathered for further inquiry and ensures it is the right data for the intended purpose. When data is gathered without any clear purpose, feelings of 'drowning in data' start to prevail rather than usefulness (Data Quality Campaign, 2016).

Equity-centered questions to guide thinking throughout this phase (Data Quality Campaign, 2020; Hawn Nelson, 2020):

- How will we initially focus upon institutional-systems change?
- What data is collected related to my focus, and how is it collected?
- How will a racial equity lens be incorporated throughout data use?
- Who is reflected in the data and who is not?

### Steps to be included in trainings:

1. Identify a focus area, involve others to understand context. (Leadership Team)*
2. Identify and locate multiple data sets aligned to the focus area.
3. Choose a single data set. Understand the data quality and characteristics, including its purpose, how it was collected, its accuracy, appropriateness and completeness.
4. Process and prepare the data – understand basic metrics, how to organize the data, including when to disaggregate or aggregate the data, and how to display the data.
5. Develop a more specific inquiry question for a larger group of staff after gathering, preparing and processing the single data set. (Leadership Team)*

**Indicates topics for school and/or district leaders to be addressed in summer 2022 training.*

## Phase 4: Dig in and transform the data into instructional action

When educators know how to make data actionable by translating it into instructional steps aligned to a specific focus, the classroom culture can shift to be more student-centered, and students take more ownership over their own learning (Hamilton, et al., 2009). In a critical data based inquiry cycle, an equity perspective is important to enrich discussions about student expectations, goals, and teacher beliefs. Part of this equity lens includes recognizing inequities or barriers to student learning, but encouraging teachers to remember where they are positioned in the system, closest to students and focus discussions on root causes that are in their control to change as educators. Thus, it is important through critical data based inquiry to acknowledge but not allow the assumptions that undergird policies, procedures, and organizational contexts to act as a barriers to making other changes that can facilitate student learning (Dodman, S.L. et. al., 2019).

Equity-centered questions to guide thinking throughout this phase (Hawn Nelson, A., et al, 2020):

- How will our culture, policies, practices and expectations shift to center equity?
- Who is benefitting from the instructional change? Who is not?
- Are we doing what we said we would do?
- How will we continuously learn from and sustain institutional-systems change?

### Steps to be included in trainings:

1. Use a collaborative discussion protocol to come to a shared understanding of what the data means from a single data set.
2. Use the additional data sets identified to look for patterns, triangulate multiple sources including student work, and come to a shared understanding of the collective findings.
3. Develop a learner-centered claim related to the focus area and grounded in the evidence.
4. Reflect on instruction and practice. Use an analysis protocol to identify a root cause that is within the educator/leader's control, identify a problem of practice.
5. Choose a research-based instructional strategy that addresses the problem of practice.
6. Develop a plan to implement the instructional strategy including monitoring progress and articulating goals.
7. Implement the instructional strategy and assess implementation.
8. Evaluate Progress, celebrate wins, adjust plan, and repeat data inquiry cycle.

# COMPASS Pathways: Data and Assessment Literacy

COMPASS Pathways are professional development opportunities with various levels of support. COMPASS Pathways will offer a variety of resources, evidence-based practices and facilitated guidance in adaptable formats that work best for schools.

Review the options below. School districts interested in being a part of the mini-courses or year-long cohort will be asked to complete an interest form.

## Asynchronous Learning

Educators and school leaders will have access to a growing library of resources on the MDE COMPASS page and Testing 1, 2, 3 page to provide professional learning individually or with their teams.

**Selected Topics for winter 2022 Asynchronous Modules and Synchronous Webinars:**

All topics will include slides and recordings, additional tools are listed in parentheses next to each topic.

- Data and Assessment Literacy Overview
- Reimagining the Vision for Assessment and Data Systems: Guiding Learning for all Students (criteria tool)
- Building a Balanced and Comprehensive Assessment System (mapping tool)
- Leading Instructional Decisions with Evidence of Student Learning: Building a data use culture (meeting templates)
- Formative Assessment 1: Where the learner is now, an introduction to learning acceleration (pre-assessment tool)
- Formative Assessment 2: Embedding evidence into instructional planning (formative assessment tool, writing assessment questions module)
- Formative Assessment 3: Using evidence to differentiate instruction (planning tool)
- Summative Assessment Design (evaluation tool, rubrics and scoring)

**Coming Soon:**

- Data and Assessment Literacy Toolkit for Educators – Spring 2022
- Data and Assessment Literacy Toolkit for School Leaders – Summer 2022
- Guidebook for Understanding Assessments – Summer 2022

## Commitment

Work through the asynchronous learning opportunities and resources available this winter and spring.

## Outcomes

Participants will become familiar with each topic and will be able to explain and use the tools with their local staff or team.

## Data Inquiry Hybrid Learning

Educators and school leaders who have a team structure in place for data inquiry and would like a framework to use for data inquiry for improving instruction within the existing team structure can participate in live virtual sessions. During these sessions, participants will practice provided using 2-3 rounds of inquiry of a single data set. This framework works best under a larger umbrella of existing school/district continuous-improvement work as a micro-level data inquiry cycle for instructional improvement in PLC or team work.

This pathway is for instructional coaches, school/district leaders and/or district/school teams who want to sharpen their data and assessment literacy skills to model the data inquiry process for leading teacher or leadership team meetings, or for structuring PLC work.

### Commitment

Attendance at all webinars in the spring series (3-4 webinars).

### Outcomes

Participants will become familiar with collaborative data-based decision making and assessment literacy work. Participants will receive a framework and tools to use for structuring their own work.

## Synchronous Mini-Courses

Learn more about data inquiry work and work through a cycle of data inquiry as a team to either identify a focus area for year-long continuous improvement or for entry of a team to a COMPASS cohort based on an instructional need.

Mini-courses will be designed to support those who are ready to engage in the work, but need support in identifying a focus and/or getting started in the planning and capacity building phases.

Leadership only, district or school leaders (individuals) and leadership teams can participate in mini-courses.

### Commitment

Attendance at all webinars in the early summer series (3-4 webinars) with two implementation options:

1. Cohort that will start in the next school year (2022-23) with a specific COMPASS team to work toward meeting their annual goals
2. Local implementation (on their own) of a year-long continuous improvement framework

### Outcomes

Participants will build their understanding of the cycle of data inquiry and apply that understanding to a longer implementation cycle. Participants will identify goals and focus area for their implementation work.

## Data and Assessment Literacy Cohort

In the 15-month cohort, district and school teams interested in beginning or enhancing implementation of data and assessment use for instructional improvement will take a deep dive into data and assessment literacy. Teams will receive training on using the data use framework and toolkit, with the goal of facilitating professional learning meetings at their school or district. This work will focus on equity goals through continuous improvement work in teaching and learning.

District and school teams should include a school system leader, a school leader, as well as one or two teacher leaders.

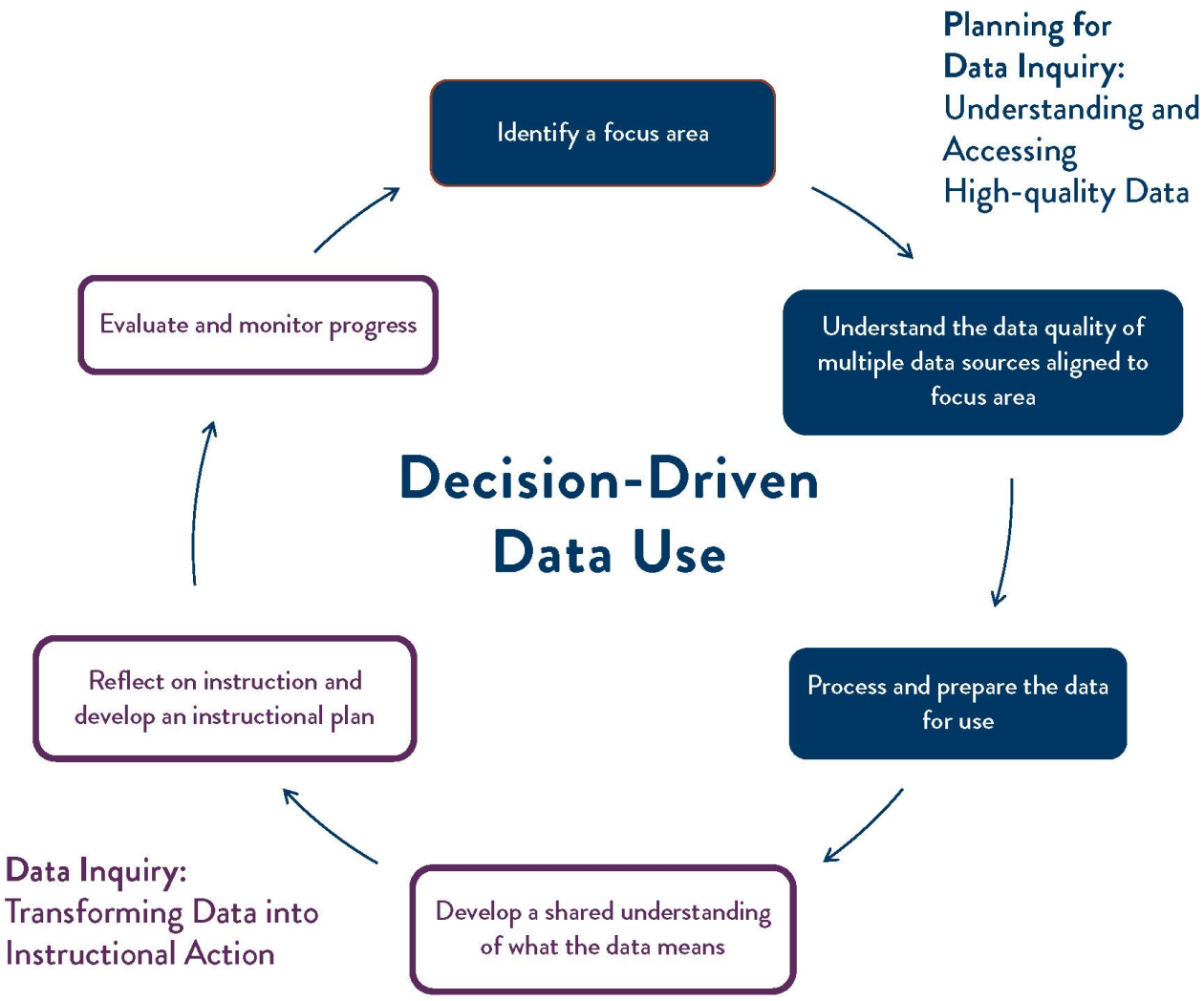
### Commitment

Attendance at all cohort webinars and coaching sessions across the 15 months of the cohort. Implementation cohort will start in Summer 2022. More detail will be released in winter 2022, including an interest survey and application due in May 2022.

### Outcomes

Participants will gain resources and a framework to use for implementing best practices related to assessment and data literacy. All materials and training on facilitation will be provided, as well as cohort meetings to discuss what is and isn't working and learn from a network of peers. Participants will be expected to engage in each session (approximately 10 full-day meetings across 15 months), complete practice activities, and share feedback about the materials and applications of the learning with others in the summer of the following year. The second summer will be an opportunity for participants to strategically plan for how the work can be spread and scaled within across their school system and how they can train others to deepen their learning.

## Appendix A: Data-Driven Decision Making



# Appendix B: Assessment and Data Literacy Proposed Module Topics

## Asynchronous Learning Modules

**Strand 1: Systems Thinking Modules**

1. Reimagining the Vision for Assessment and Data Systems: Guiding Learning for all Students (criteria tool)
2. Building a Balanced and Comprehensive Assessment System (mapping tool)
3. Conditions for building a data use culture (Ladder of inference tool, Eight Considerations for Establishing Strong Data Culture)
4. Introduction to a data inquiry mindset across systems levels – classroom, school, district, state

**Strand 2: Assessment Literacy Modules**

5. Formative Assessment 1: Where the learner is now, an introduction to learning acceleration (pre-assessment tool)
6. Formative Assessment 2: Embedding evidence into instructional planning (formative assessment tool, writing assessment questions module)
7. Formative Assessment 3: Using evidence to differentiate instruction (planning tool)
8. Summative Assessment Design (evaluation tool, rubrics and scoring tool)
9. How to get there: providing feedback that moves learning forward (Success criteria)
10. Performance assessments (Culturally responsive classroom assessment inventory tool)
11. Rubrics, scoring and grading summative classroom assessment (Benchmark ALDs)
12. Understanding the technical concepts used in student assessment (Testing 1, 2, 3 MCA resources)
13. Putting the pieces together

**Strand 3: Understanding the data needed for decision-driven data use.**

14. Framing a focus area for data use and identifying multiple data sources (Data Inventory Tool)
15. Understanding data quality, characteristics and properties
16. Organizing, visualizing and preparing purposeful data
17. Accessing and interpreting data from Minnesota statewide assessments (Testing 1, 2, 3 resources)
18. Accessing and interpreting data from MDE data center

## Hybrid Learning and Mini-Courses

**Strand 4: Transforming the data into action across a school year for continuous improvement**

19. Data Inquiry for Principals (Data and Assessment Literacy Toolkit for School Leaders)
20. Data Inquiry for Teachers - Transforming assessment results into instructional decisions (Data and Assessment Literacy Toolkit for Educators)

## Glossary

- **Assessment:** The process of gathering evidence of student learning to inform education-related decisions (National Task Force on Assessment Education, 2018).
- **Assessment Literacy**: The ability to know how, when, and why to assess student learning (Stiggins, Arter, & Chappuis, 2004). Assessment literate educators choose, design, and use a variety of assessment types that are reliable and gather the right collection of evidence that supports an understanding of what students know in order to guide them where they need to go next (Evans & Thompson, 2020).
- **Balanced and Comprehensive Assessment Systems:** Assessment systems provide results that can be interpreted and used in a particular way. Assessment systems are balanced when the various assessments in the system are coherently linked through a clear specification of the learning targets. Assessment systems are comprehensive when they provide multiple sources of evidence to support educational decision-making and they continuously document student progress over time (NRC, 2001). (MnMTSS Component 4)
- **Culturally Responsive Data Literacy:** The ability to transform information about students' brilliance, cultural wealth, and intellectual potential (Safir & Dugan, 2021) into actionable instructional knowledge that helps determine next steps in developing culturally responsive instruction. This is an approach to using student data to help diagnose root causes of inequities and make changes to systems that are in the control of teachers and leaders, as facilitators of student learning (Mandinach & Lacireno-Paquet, 2020).
- **Data:** Any information (both quantitative and qualitative) that helps educators know more about their students and can be codified in some manner. Examples include statewide standardized tests, interim or benchmark assessments, locally developed periodic assessments, tests, quizzes, disciplinary information, parental information, teacher observations, and school policies (Jimerson and Wayman, 2015).
- **Data Inquiry:** An iterative process for using a focus question or protocol of questions to guide collaborative sense making of data and interpretations (Gummer & Mandinach, 2015).
- **Data Literacy:** The ability to continuously, effectively, and ethically access, interpret, act on, and communicate multiple types of data from classroom, local, state and other sources to improve outcomes for students in a manner appropriate to the user's professional roles and responsibilities (Data Quality Campaign, 2016).
- **Data Literacy for Teachers**: The ability to transform information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting all types of data (assessment, school climate, behavioral, snapshot, longitudinal, and so on) to help determine next steps for instruction. This combines an understanding of data with academic standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and how children learn (Gummer & Mandinach, 2015).

## Resources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