

# A District Leader's Guide to Using Data

From Collection to Impact





# Are You a Data Collector or a Data User?

The recent proliferation of digital assessment tools along with the rise of more formative and standards-based approaches to learning means K-12 schools are swimming in data. A good problem to have? Only if educators know how to effectively use it.

As schools shift focus from high-stakes testing to formative, through-course assessments, district leaders must adjust to these four mindsets to ensure the data collected is used to drive student outcomes.

- 1** Collect Data → Use Data
- 2** Measure Learning → Measure Learning Opportunity
- 3** Intermittent Data Analysis → In-the-moment Data Analysis
- 4** Disconnected District Decision-Making → Collaborative Connections with Classrooms



# 1

## Collect Data → Use Data



**From the federal level to the district level, the pressure on educators to demonstrate student achievement with data is relentless.**

Longitudinal data collection was once reserved for end-of-year assessments and state standardized tests. But with the rapid increase of educational technology in the classroom, teachers now face a barrage of data points and limited time to analyze them.

Teachers know that data is only valuable if they can put it into action. This common feedback loop drives meaningful data-driven instruction:

1. Teachers plan instruction.
2. Teachers collect student data through formative or summative assessments.
3. Teachers assess student understanding.
4. Teachers pivot instruction based on data analysis.

According to a [2015 Gates Foundation study](#), virtually all teachers (93 percent) regularly use some form of digital tool to guide instruction. Ideally, technology makes this feedback loop more efficient. In reality, disparate data from a variety of learning tools make analysis a chore. More than two-thirds of teachers (67 percent) say they are not fully satisfied with the effectiveness of the data or the tools for working with data.<sup>1</sup>

Before districts get too granular with data sets, administrators need to set a solid data culture foundation. If educators are

going to solicit data from students, they have a moral obligation to use that data to benefit the students they solicited it from. Just as teachers ask, “What do I want my students to learn?” before they plan lessons, administrators should similarly map backwards and ask themselves, “What are the most critical data points that demonstrate my school or district’s growth?” When data goals are clear, classroom instructional decisions become clear.

Educators should ask these key questions to get the most benefit from their data collection:<sup>2</sup>

- Why are we gathering data in the first place?
- With whom are we sharing the data?
- What actions are we taking as a result of our analysis of the data?
- Does our collection of data lead to higher levels of student learning?

Asking these questions will help educators separate the signal from the noise when it comes to deciding what data to track and use.

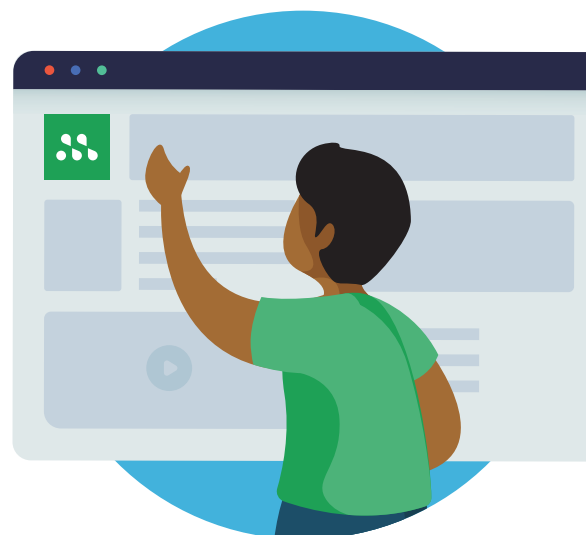
<sup>1</sup>Bill and Melinda Gates Foundation. (2015). Teachers Know Best: Making Data Work for Teachers and Students: <https://s3.amazonaws.com/edtech-production/reports/Gates-TeachersKnowBestMakingDataWork.pdf>

<sup>2</sup>DuFour, Richard. (2015). How PLCs Do Data Right. Educational Leadership. 73(3). Retrieved: <http://www.cds.ednet.ns.ca/wp-content/uploads/2015/09/PLCs-and-Data.pdf>



# 2

## Measuring Learning → Measure Learning Opportunity



**Closing the achievement gap has always been a primary concern for educators. But, with the recent necessity for remote learning, there is potential that the gap will widen the span of learning needs.**

The right assessment data allows educators to address individual learning challenges with the daunting challenge of teaching students with an even wider student performance, while also providing leaders insights into needs for additional institutional supports.

Student learning data can come from assessing understanding at the end of a unit or it can be formative, in-the-moment, embedded checks for understanding. There is value in both, but as schools and districts seek to increase equity and access across all learning channels, there is a growing need for shorter, more frequent assessments to ensure student progress in both remote and traditional learning environments.

Formative assessment data enables teachers to adjust instruction in the moment, when it can have the greatest impact on student learning. Effective educators use formative data to inform instruction, target students for interventions, and evaluate their own efficacy.

Pushing educators to move beyond asking, “What worked?” to “What will work better moving forward?” will drive more meaningful data conversations and ultimately, more impactful instruction. Compared to traditional grades of the past, standards-based grading empowers teachers to measure what students know and don’t know—standard by standard.

Advances in assessment technology have enabled teachers to collect complex, standards-based data that goes far beyond the insights of a traditional test. When formative assessments are implemented into the instructional cycle, educators have the opportunity to identify gaps in understanding well before benchmarks and end-of-year testing, lessening the stress that the high-stakes summative assessments bring to schools and districts. Data should always enable educators to look forward, not backward. Its focus should be informative, not punitive.

Districts will, of course, still collect summative data, but these summative data points should be used as benchmarks in conjunction with teachers’ formative data to provide an adequate roadmap for improving student outcomes.



# 3

## Intermittent Data Analysis → In-the-moment Data Analysis

**Formative assessment data allows educators to capture a snapshot of their students' understanding so they can make timely decisions to drive the learning process forward.**

Unlike summative assessment data, which is often gathered at the end of the school year, formative data is readily available to educators and offers much deeper context into student levels of understanding.

District data analysis also needs to occur regularly, rather than intermittently. Some tools offer administrators dashboards to view student learning progress in real time. Analyzing and using this data in the moment rather than at the end of a semester or year enables district leaders to calibrate interventions and evaluate teacher efficacy based on student mastery levels. Rather than broad, intermittent changes, small shifts with real-time data lead to more immediate student progress and targeted instruction.

The University of Chicago Consortium on School Research recommends real-time data be viewed in a roster format so connections with year-end data can be easily analyzed and connected.

A commitment to frequent data analysis requires an increase in collaborations between the central office and classrooms.



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Rosters are the link between a data system and student-level interventions or Multi-Tiered Systems of Support, and the organization of a roster should ... use language consistent with quarterly and end-of-year data. In addition, the format of a roster should allow a team of adults to quickly filter and sort through different sub-groups to move further toward hypothesizing about potential root causes.<sup>3</sup>

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<sup>3</sup>Moeller, E., Seeskin, A. & Nagaoka, J. (2018). Practice-Driven Data: Lessons from Chicago's Approach to Research, Data, and Practice in Education. Chicago, IL: UChicago Consortium on School Research.



# 4

## Disconnected Decision-Making → Collaborative Connections

**From the classroom to the district office, data-driven instruction needs to be a team effort. The first step in this is establishing a strong data culture.**

The [2017 National Education Technology Plan](#) recommends school leadership develop clear communities of practice for educators at all levels that act as a hub for setting vision and sharing practices but states, “few schools have adopted approaches for using technology to support informal learning experiences aligned with formal learning goals.”<sup>4</sup>

Principals and district leaders need to create a “we” feeling in the school and stress that student achievement is everyone’s responsibility.<sup>5</sup>

To form effective data-driven decisions, district and school leaders need to:<sup>6</sup>

- **Clearly define the purpose for data collection and analysis.**
- **Model norms for data conversations.**
- **Establish a culture of collaboration.**

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No educator is an island. Sharing resources and delivering common assessments on a school or district-wide scale forms a solid foundation of consistent data.<sup>7</sup>

**TRENTON GOBLE**  
VP of K-12 Learning at Instructure

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To ensure productive collaboration between stakeholders, leaders must build a positive data culture. When leaders and educators can agree that all data is good data (it always offers opportunity for growth), they can view each data point for precisely what it is—evidence of the teaching and learning that is happening in their school(s). When professional learning communities use this belief as the foundation for its success, schools and districts can work together toward a common goal of more students doing better everyday. Leaders should prioritize frequent, in-person check-ins and meetings with teachers to normalize productive data conversations and allow all stakeholders an opportunity to provide input on decisions.

<sup>4</sup>U.S. Department of Education. (2017). Reimagining the Role of Technology in Education: 2017 National Education Technology Plan Update. Retrieved: <https://tech.ed.gov/files/2017/01/NETP17.pdf>

<sup>5</sup>Goodwin, B. (2015). Mindsets are Key to Effective Data Use. *Educational Leadership*, 73(3). Retrieved: <http://www.ascd.org/publications/educational-leadership/nov15/vol73/num03/Mindsets-Are-Key-to-Effective-Data-Use.aspx>

<sup>6</sup>Datnow, A., Park, V., & Kennedy-Lewis, B. (2013). Affordances and constraints in the context of teacher collaboration for the purpose of data use. *Journal of Educational Administration*, 51(3), 341–362.

<sup>7</sup>Goble, T. (2020). 5 truths for building a successful data culture. *eSchoolNews*. Retrieved: <https://www.eschoolnews.com/2019/12/17/5-truths-for-building-a-successful-data-culture/>





## How an Assessment Management System Can Help

**When district leaders and educators commit to using data in an intentional way, the sea of spreadsheets and bar graphs won't be so daunting. The right assessment tool will support educators by providing them with real-time, actionable data so they can effectively inform their instruction.**

An Assessment Management System (AMS) is a powerful way to streamline data analysis, inform instructional decisions, and personalize student learning. And, when used across a district, leaders and teachers get deeper, more actionable insights into learning trends and instructional best practices.

The 2017 National Education Technology Plan acknowledges that “while school and district leaders often leverage data for decision-making, many still need support and better tools so they can get real-time information on how strategies are working.”

The optimal assessment system, the plan states, is interoperable with other learning tools and balances multiple assessment approaches.<sup>8</sup>

Using a common platform for assessment means districts can spend less time on data aggregation from disparate sources and more time using data to drive student growth.

Mastery Connect, the AMS that is part of the Instructure Learning Platform, is an integrated formative and benchmark assessment system that delivers the standards-aligned performance data educators need to target interventions, drive instruction, and supercharge collaborative teams. Although a powerful system on its own, when paired with other Platform solutions like Canvas LMS, educators have a centralized hub to assess student progress and deliver personalized curriculum.

**Read more on the following page about how Mastery Connect can help your district shift from just collecting data to actually using it in an impactful way.**

<sup>8</sup>U.S. Department of Education. (2017). Reimagining the Role of Technology in Education: 2017 National Education Technology Plan Update. Retrieved: <https://tech.ed.gov/files/2017/01/NETP17.pdf>





# Streamline Data-Driven Instruction with Mastery Connect

## Formative Assessment

Search, create and administer formative assessments to get immediate feedback about what your students know—and don't know—so you can target interventions and adjust instruction in the moment.

## Benchmark Assessment

Easily create benchmarks using item authoring tools or integrated item banks for teachers to deliver and score in the classroom. Set proficiency targets, measure growth, and incorporate benchmark data into the formative process. The Benchmark Compare feature offers a side-by-side view of students' formative and benchmark assessment data, allowing educators to identify important patterns and trends in student levels of understanding.

## Curriculum Planning

Map your curriculum by adding lesson plans, activities, videos, and other resources aligned to any set of standards. And save time by building on maps year after year.

## Teacher Collaboration

Fuel your PLC with collaborative tools, like common assessments and comparison reports, to gain insight into best practices, learning trends, and instructional approaches.

## Integration

When you pair Mastery Connect with Canvas LMS, you get single sign-on and automatic data passback, so teachers can launch formative or benchmark assessments directly from the Canvas interface.



**Mastery by Instructure brings together the assessment tools and quality content educators need to implement a successful assessment program.**

**Learn more about how our assessment offerings—including the Mastery Connect assessment management system—drive learning forward and positively impact student success.**







# Powering the World's Smartest Classrooms.

Instructure is an education technology company dedicated to helping everyone learn together. We amplify the power of teaching and elevate the learning process, leading to improved student outcomes. Today, Instructure supports more than 30 million educators and learners at more than 6,000 organizations around the world.

The Instructure Learning Platform makes learning more personal and student success more equitable by delivering the solutions you need to support, enrich, and connect every aspect of teaching and learning. In addition to Mastery by Instructure, the Instructure Learning Platform includes:



**Canvas by Instructure:** bringing together Canvas LMS, video engagement with Canvas Studio, a branded course catalog system by Canvas Catalog, and student badging and e-portfolios with Canvas Student Pathways.



**Elevate by Instructure:** improving the use of data and technology to help solve district challenges and give educators the information they need to make impactful decisions.



**Impact by Instructure:** helping teachers and students adopt educational technology to promote deeper engagement with learning while guaranteeing the campus edtech ecosystem is utilized to its fullest potential.

Learn more at <https://www.instructure.com/k-12>.