

A photograph of a man in a suit and glasses presenting to a group of people in a meeting room. He is standing next to a whiteboard filled with diagrams and notes. The group is seated around a table, looking at the presenter. The image has a blue overlay and a network diagram pattern.

SKETCHING AN ADMINISTRATOR'S ROLE IN FOSTERING DATA LITERACY

District administrators must facilitate a culture of support to ensure every educator can effectively interpret and leverage data.

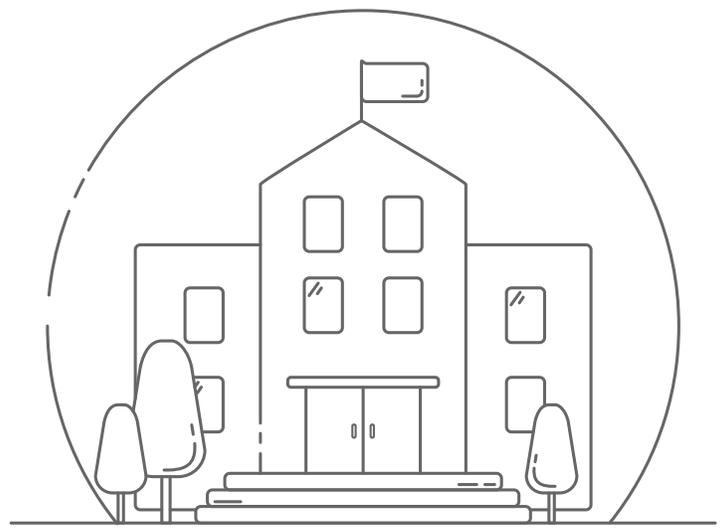
During the Q&A following his [plenary address](#) to the 2009 Institute of Education Sciences Research Conference, former U.S. Secretary of Education Arne Duncan issued a clarion call to the American educational community at large: “What we need to do is figure out how we challenge schools...to make sure teachers come into the profession not just with classroom management skills, and not just understanding some of the philosophy of education, but being able to use data from day one to really drive instruction.”

Nearly a decade later, data literacy remains a topic around which there has been much discussion — and not a lot of action. As District of Columbia Public Schools Instructional Coach and 2012 Maryland State Teacher of the Year, Josh Parker [describes it](#), “We are data-rich, but information poor. We have access to a range of data points, but our understanding of what they measure, why they matter, and how they impact practices is shallow.”

Over the course of the last decade, the exponential rate at which educators’ access to student data has increased has far outpaced the training they’ve received to effectively leverage it. That said, especially in recent years, there has been an encouraging uptick in efforts to develop data literacy up and down the administrative ladder.



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THE STATE OF DATA LITERACY

According to a [study](#) conducted on behalf of the Bill & Melinda Gates Foundation, 93 percent of teachers regularly use digital tools to guide their instruction, 78 percent agree that data helps validate “where their students are and where they can go,” and 61 percent say that data and digital tools make them better teachers.



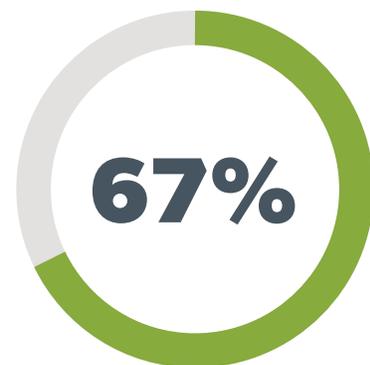
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This broad-based enthusiasm notwithstanding, 67 percent of the teachers surveyed claim that “they are not fully satisfied with the effectiveness of the data or the tools for working with data that they have access to on a regular basis.” While part of this frustration stems from inadequate data infrastructure and district-level support, insufficient data literacy among teachers is also a contributing factor.

At a higher level, administrative stakeholders have taken a variety of steps designed to improve data literacy among their teaching staffs. Most broadly, the 2015 Every Student Succeeds Act (ESSA) opened the door to using Title II dollars to fund data literacy training. According to the [Data Quality Campaign \(DQC\)](#), 41 states have started training teachers and principals on how to use data to inform instruction and 19 states now include a data literacy component in their licensure procedures.

However, as things stand, most school districts in the United States have yet to answer Duncan’s call in any sort of substantive way. While it’s tempting to hope that the rising crop of “digital native” teachers will be more data literate than their predecessors, the truth is that tech-savvy and data literacy aren’t necessarily correlated.

As such, it falls to mid- and high-level educational administrators to foster a district-wide culture that encourages and facilitates data literacy. As Parker puts it, “If ‘data’ is the four-letter word that sends teachers running for cover, school leaders and administrators most likely have not done the actions that are necessary for creating a positive climate for data analysis and use.”



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UNDERSTANDING DATA LITERACY: THE BASICS

A lack of consensus around what data literacy really entails continues to be a major stumbling block, both for teachers striving to become data literate and for administrators striving to support them.

In an effort to facilitate more — and better — policymaking on the issue, DQC proliferated the following definition of data literacy: “Data literate educators continuously, effectively, and ethically access, interpret, act on, and communicate multiple types of data from state, local, classroom, and other sources to improve outcomes for students in a manner appropriate to educators’ professional roles and responsibilities.”

Several aspects of this definition merit a few brief comments. First, data usage must be continuous. Effective data usage is a matter of tangible application, meaning it needs to be integrated into a teacher’s daily routine.

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Source: Data Quality Campaign

Conceiving of data as something that need only be deployed once — or even periodically — is not only inconsistent with true data literacy, but is the foundation of persistent confusion about the confusion between data literacy and *assessment literacy*.

Second, teachers must use data in an ethical manner. No matter how seemingly insignificant, student data must be kept private, meaning records should only be accessible to those with a direct stake in a student's success. In addition to keeping it confidential, teachers also have a responsibility to keep student data secure by adhering to all district-issued cybersecurity policies.

Finally, teachers must learn to communicate data — and the insights derived thereof — with a wide variety of stakeholders, including not only administrators, but parents, other teachers, and even students. Data literacy is inherently communal, and it cannot thrive without the support of a robust data culture grounded in frequent, transparent communication.



DIGGING DEEPER INTO DATA LITERACY

While this definition serves as an important entry point into an ongoing conversation, it doesn't quite capture the full scope of all that is implied by "data literacy." In fact, as researchers Ellen B. Mandinach and Edith S. Gummer astutely [observe](#), definitions like DQC's are "meant to be generic, communicating the basic ideas to various stakeholder groups that include policymakers, professional organizations, and the general public."

In an effort to build on the existing literature, Mandinach and Gummer have sketched their own definition of data literacy in a [paper](#) published in *Teaching and Teacher Education*:

Data literacy for teaching is 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, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with

standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn.

Mandinach and Gummer go on to identify 27 skills for using data, 11 skills for transforming data into information, five skills for transforming information into a decision, five skills for evaluating outcomes, and six "dispositions or habits of mind" that influence how effectively teachers are able to leverage data.



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HOW TO FOSTER DATA LITERACY FROM THE DISTRICT OFFICE

For teachers already preoccupied with the overwhelming day-to-day demands of the classroom, fine-tuning over fifty skills and dispositions is a monumental undertaking. It falls to administrators — especially at the district level — to build the support structures necessary to make universal data literacy a reality. These structures fall into three loosely-defined categories: tools, training, and culture.

Tools



There's no doubt that educators' access to student data has increased significantly over the last decade, but when it comes to data, more is not always better. Administrators have a responsibility to provide teachers with high-quality data, or data that is longitudinal, actionable, and well-organized.

Longitudinal data is important because datasets that are incomplete or only capture a snapshot of a particular moment fail to facilitate continuous data usage — one of DQC's key components of data literacy.

Further, the actionability of data pivots on how well it's organized, which is why a robust technical infrastructure is invaluable. Paper records are a thing of the past and ordinary spreadsheets and collaborative tools (think: Google Sheets) are insufficient — and often insufficiently secure — meaning administrators must invest in more

sophisticated data tools like early warning systems and student data dashboards.

According to the Bill & Melinda Gates Foundation study, schools that invest in cutting-edge data tools, integrate technology into instruction, and provide on-demand tech support report a proportion of "data mavens" — defined as teachers who "focus on individualizing learning plans to address the whole student" — 15 percent higher than those that do not.

If data literacy is a chisel, high-quality data and powerful data technologies are the marble from which teachers sculpt optimal outcomes. They may not fall under the definition of data literacy proper, but without good data and good tools, data literacy itself serves no purpose.

Training

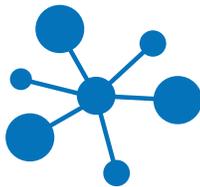


When it comes to developing data literacy, there is no task more critical for administrators than providing ongoing, effective professional development (PD) to all teachers and support staff. As Parker puts it, “An ideal data literacy [training] program provides teachers with tools to organize their data and guidelines on how to understand and analyze it to help [them] make the connection of the data to their practice.”

But while hands-on, data literacy-oriented PD is a must, it’s only half of the picture. Teacher preparation programs — at both the

undergraduate and graduate levels — need to be job-embedded to help young teachers build rudimentary data skills from the get-go. Duncan’s goal was for teachers to “use data from day one,” not “after a year or two of data literacy PD.” As with any skill in any profession, teachers will need to learn and/or refine certain data literacy skills on the job, but it’s no longer acceptable for new teachers to show up on their first day without at least a basic understanding how

Culture



For administrators, support is the name of the data literacy game — and that support starts with a district-wide data culture. While tools and training serve as the foundation of a healthy data culture, they’re not the only things administrators must consider.

For instance, administrators can improve teacher buy-in by soliciting input on new data tools and strategies and adopting those that prove productive. Additionally, it’s important for administrators to recognize that developing data literacy takes time, and that this time must be carved out of existing schedules — not added on as yet another thing teachers must do outside of the classroom. Formal PD programming is part of this, but it should be supplemented with

dedicated meeting time during which teachers can share experiences and work collaboratively toward improving their data literacy as individuals, as a grade-level or subject matter team, and as a schoolwide staff.

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AN ONGOING IMPERATIVE

As educators, we have not just a professional, but a moral responsibility to deliver a quality, individualized education to each and every student who walks through our doors. As Duncan declared in the conclusion to his address, “[Education] is the foundation for a strong future and a strong society. Education is the civil rights issue of our generation. The fight for quality education is about so much more than education. It’s a fight for social justice.”

It’s a lofty goal — but it’s the reason that many of us became educators in the first place. Raising the level of data literacy across the teaching profession is an important step in this fight, a step all of us at [Hoonuit](#) are striving to facilitate.

That’s why we partner with districts to create intuitive, educator-focused analytics programs that consistently drive positive student outcomes. Our advanced data models integrate with existing SIS, financial, HR and many other systems (including generic dataloaders), providing educators with unimaginably granular analyses at the student, school, and district level. Additionally, our customer-centric approach enables us to provide unparalleled service to help you create a productive, data-driven culture.

The path to data literacy isn’t always easy or straightforward, but in today’s educational landscape, it’s an essential part of ensuring that every student gets the chance to realize their full potential.

Click [here](#) to learn more.

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