Data Interoperability in Education: Empowering Those Closest to Students

DQC
DATA QUALITY CAMPAIGN

For many in the education field, "data interoperability" sounds like a remote, technical concept that isn't relevant to their day-to-day work with students. But interoperability—securely transferring data between platforms or systems—invisibly underlies many of the tools teachers rely on to serve their students and makes teachers' jobs easier every day. By supporting interoperability, state and district leaders can help ensure that their educators are able to spend less time pulling data together from different programs and sources and more time using data-informed insights to meet their students' needs.

What Is Education Data Interoperability, and Why Does It Matter?

Suppose a teacher is trying to better understand a student—the student's strengths, where they're struggling, and what instructional or program supports can help them succeed. That teacher may log in to the district's student information systems to look at the student's formative assessments, the state data system to see the student's academic growth from the previous year, the teacher's own electronic gradebook to check on the student's attendance, and the online homework platform where the student completes some assignments. Each system might use different terms and format data in different ways. Interoperable data systems can bring together data from these different sources. Without interoperable data systems, teachers are stuck logging in to each of these systems separately, downloading the data they need, and compiling it into spreadsheets or documents to try to make sense of it themselves.
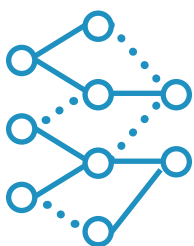
Out in the world, interoperability allows you to use a website that compares flights from different airlines to plan your vacation or to withdraw cash from different banks' ATMs. When you use another bank's ATM, data is safely and seamlessly exchanged with your bank, allowing you to withdraw cash from your account and the transaction to show up on your bank statement in real time. Interoperability in education allows families and educators to easily and securely access information about their student from

PROJECT UNICORN

Project Unicorn defines data interoperability as "the seamless, secure, and controlled exchange of data between applications."

Practically speaking, interoperability means that those closest to students—educators and families—can easily and securely look at relevant data elements about their student side by side, seamlessly integrating data from different programs.

Successful interoperability requires a technical infrastructure with a common vocabulary and aligned systems that make transporting data across programs and systems more efficient, accurate, and secure.

different systems. For teachers, interoperability means the difference between having to go to the school basement and pull out a student's manila folder and being able to open an app and see everything about the student that they need to personalize instruction for that student.

Where Is Interoperability Happening, and How Is It Making a Difference?

Teachers and parents overwhelmingly see the value of data in supporting students. Teachers and education leaders want to be able to understand their students in ways that let them differentiate instruction, communicate with families, and improve services. Following are some places where interoperable data systems are helping teachers and state leaders achieve these goals.

- Through the Arizona Education Data Standards (AzEDS), the Arizona Department of Education modernized its data infrastructure, and this commitment allowed the state to rapidly respond to the pandemic. AzEDS was able to pull three data points (eligibility for financial benefits, parent information, and student address) from different state systems so that the Department of Economic Security could ensure that eligible families would quickly receive financial support through the federal government's Family First Coronavirus Response Act.

- Districts across the country have committed to using a single sign-on (SSO), a mechanism that gives users a single log-in credential to access multiple data applications. SSOs avoid burdening educators with having to remember multiple usernames and passwords for a variety of applications. SSOs also help protect student privacy by limiting data access to those who need it for their job.

- In Wyoming, the Unita County School District #1 (UCSD #1) has committed to engaging its community and partnering with other school districts to create an interoperable data system. As an early part of this work, UCSD #1 has developed new data visualizations to help teachers make sense of and use data.

- Georgia's virtual "tunnel" links data from a single state system directly to district-level student information systems and allows district administrators, principals, teachers, and parents to access state education data through their district's existing program. Through the tunnel, teachers and parents have access to detailed data about their students and curated resources to support them.

Learn More and Take Action

State leaders have a responsibility to make data work for students. While innovations in data use often come from local districts, many effective data practices are simply not possible at scale without interoperable data systems.

## Find out more from the following resources:
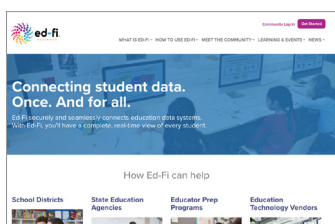
Ed-Fi Alliance. An education leader-driven community and a nonprofit, Ed-Fi provides data standards, tools, and guidance to improve education data system management and interoperability.
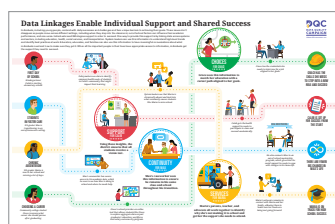
Data Linkages Enable Individual Support and Shared Success. This infographic shows what is possible when trusted adults in and outside of the classroom have the data they need to support individual students.
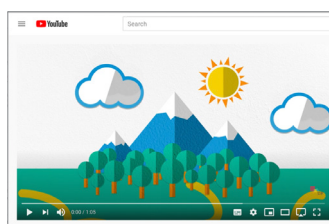
"Harnessing the Power of Data in Education." This video from Digital Promise explains why interoperability is key to empowering educators, families, and students with data.
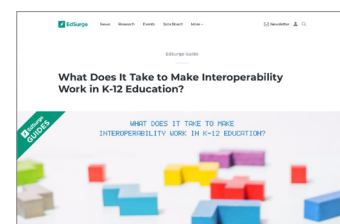
What Does It Take to Make Interoperability Work in K–12 Education? EdSurge's guide to education interoperability includes briefs, tools, recommendations, and success stories.

The Data Quality Campaign is a nonprofit policy and advocacy organization leading the effort to bring every part of the education community together to empower educators, families, and policymakers with quality information to make decisions that ensure that students excel. For more information, go to www.dataqualitycampaign.org and follow us on Facebook and Twitter (@EdDataCampaign).