

InnovateEDU Uses Ed-Fi Technology to Scale Personalized Learning for Small Districts and Individual Schools

EXECUTIVE SUMMARY

ORGANIZATION: InnovateEDU

PROJECT: Cortex Web-Based Platform

CHALLENGE

- Student information systems are custom-configured for specific academic models, creating a high technological and financial barrier
- NGLC schools, small school districts, and individual schools can't afford the technology
- Schools don't control data at the local level

SOLUTION

- Started with the Ed-Fi Data Standard and Ed-Fi Operational Data Store
- Built Cortex to be the widest possible reusable configuration of a schema and information system alongside a learning management system
- Added API functionality to enable schools to connect with ed-tech vendors and the Ed-Fi Community

RESULTS

- Created new use cases for the Ed-Fi Data Standard within next-generation schools, small districts and individual schools
- Cortex is easily adaptable to any academic model
- Seamless front-end and back-end integration with state education agencies and vendors

“Having the Ed-Fi technology and schema available to us meant that we didn't have to start from scratch. It gave us the ability to build a platform that is both easily scalable and sustainable.”

— Erin Mote, Executive Director, InnovateEDU

Overview

Even the most digitally focused schools keep track of different types of student data through a variety of means, both electronic and paper-based — and few of these means are compatible with each other. Additionally, there is a pressing need for a secure electronic platform that can provide teachers with a holistic view of each student. With its Cortex product, InnovateEDU developed just such a platform.

InnovateEDU is a nonprofit that aims to accelerate innovation in next-generation learning models and tools that serve, inform and enhance teaching and learning. The company developed Cortex using the Ed-Fi Data Standard and helpful insights from the Ed-Fi Community.

According to Eric Tucker, executive director at Brooklyn Laboratory Charter School, Cortex enables schools “to get better each day at designing experiences that enhance student intellectual character and competence. Brooklyn LAB students grew an average of over three years at reading and writing in a single year as a result of these insights.”

InnovateEDU executive director Erin Mote finds multiple benefits to working with the Ed-Fi Alliance. “We made the decision to go with Ed-Fi technology because of its wide adoption in 35 states and large districts. Also, the Ed-Fi Data Standard makes it much easier for ed-tech vendors, school districts, individual schools and state education authorities to collaborate and integrate with Cortex.”

The Unique Needs of Innovative Schools

Early in 2014, representatives from schools in the Next Generation Learning Challenges (NGLC) network met in a windowless conference room in Newark, New Jersey, to share information about their academic and technology initiatives. Their conversations revealed that, although they were all working on breakthrough school models, they had difficulty collaborating and sharing resources. They also lacked the technology they needed to enhance teaching and learning in ways that furthered their innovative missions.

This meeting started Erin Mote, co-founder of Brooklyn Laboratory Charter School, down the path that led to founding InnovateEDU. To her it was clear that schools needed a systematic way to record, analyze and act upon operational, instructional and assessment data about students. She envisioned a secure electronic platform that could provide teachers with a holistic view of each student — going beyond attendance, discipline, and summative and interim assessment data to include formative assessment results, output from courseware, and samples of student portfolios.

When all this data is compiled, it would allow teachers to do several things: understand how students are progressing toward specific standards, translate the data into personalized learning recommendations, and deliver educational content to students in ways that best address their individual needs and learning styles.

This was almost impossible at present, because available student information systems were custom-configured for specific academic models. Individual schools and small districts couldn't afford to acquire the technology or invest in building a customized system. In the end, they didn't own their own data.

Mote resolved to change this.

RESOURCES

TEAM

- InnovateEDU
- Brooklyn Laboratory Charter School
- Achievement First
- Next Generation Learning Challenges
- Michael & Susan Dell Foundation
- Ed-Fi Alliance

ED-FI TECHNOLOGY USED

- Ed-Fi Data Standard
- Ed-Fi Operational Data Store
- Ed-Fi OPS API in Corext V3

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InnovateEDU Develops the Cortex Platform

InnovateEDU worked closely with Brooklyn Lab and a group of next-generation schools to identify technology design principles for Cortex, a new web-based platform based on Ed-Fi technology. Achievement First joined the effort to assist with design and development, in conjunction with the Greenfield School project.

With the Ed-Fi Data Standard and Ed-Fi Operational Data Store schema serving as the technological backbone, InnovateEDU developed the first version of Cortex in just 10 weeks. “Having the Ed-Fi technology and schema available to us meant that we didn’t have to start from scratch,” shares Mote, now InnovateEDU’s executive director. “It gave us the ability to build a platform that is both easily scalable and sustainable.”

Through a simple user interface that features a responsive website design, Cortex empowers teachers to gather a wide range of important information about students’ learning experiences in one secure location. Due to the flexibility of Ed-Fi technology, InnovateEDU was able to develop its own user interface while still relying on an Ed-Fi Operational Data Store underneath, enabling Cortex to serve as a repository of information necessary for operational compliance.

Sharing and Scaling with the Ed-Fi Alliance

InnovateEDU loves being part of the Ed-Fi Community — a group of fellow technology leaders and education professionals that help develop Ed-Fi technology and improve each other’s use of it. The process of developing Cortex was significantly enhanced by insights from other community members.

For example, conversations with the Pennsylvania Department of Education introduced InnovateEDU to a set of features around interventions for social-emotional and academic supports, as well as predictive features related to attendance. Other conversations informed Cortex’s UI/UX and feature design — which saved InnovateEDU countless hours of brainstorming, development and iteration. And now, as Cortex expands access to the Ed-Fi Data Standard, InnovateEDU is contributing value back to the community.

Because the platform is configurable and agnostic of different academic models, any school system or single school can deploy Cortex as their primary student information and data system. “Cortex has a built-in elasticity that allows anyone to plug an academic model into the system — one that uses absolutely no digital content all the way up to one that uses all digital content — and it will work,” explains Mote. “I think we’ve solved a real problem that many schools have right now when attempting to advance digitally powered education.”

““ The use of the Ed-Fi technology in Cortex has helped deliver robust new functionality in an incredibly short timeframe. In just a few months, dozens of new features have been added that will help us realize the vision of truly personalized learning for our scholars.”

– Lisa Minott, Director of Technology Team Greenfield Achievement First

Development priorities for future versions of Cortex include enhanced student learner profiles, enhanced reports and school-level data visualization, and a family engagement portal that enables parents to view their child's progress and facilitates communication between teachers and parents.

"I don't believe that technology is ever going to replace great teachers," says Mote. "However, there are ways to give teachers and schools better tools that allow them to be smarter about student information and bringing together operational and instructional data."



About the Ed-Fi Alliance

The Ed-Fi Alliance is an organization leading the movement to improve K-12 education by unlocking the potential of untapped, valuable data that is collected by states and school districts every day.

The Ed-Fi Data Standard is the leading educational data standard and serves as the foundation for enabling interoperability among secure education data systems designed to improve student achievement and teacher satisfaction. Ed-Fi technology builds secure bridges between disparate data systems, empowering teachers with real-time, actionable insights so they can better understand the individual needs of every student in their classroom.

To learn more about the Ed-Fi Alliance, the Ed-Fi Data Standard, and the Ed-Fi Operational Data Store please visit Ed-Fi.org.



About InnovateEDU

InnovateEDU is a Brooklyn-based non-profit whose mission is to eliminate the achievement gap by accelerating innovation in Common Core-aligned, next generation learning models and tools that serve, inform, and enhance teaching and learning. InnovateEDU convenes students, teachers, entrepreneurs, and designers to re-imagine and reinvent education by putting students' and teachers' needs at the heart of design.

To learn more about InnovateEDU, please visit www.InnovateEDUNYC.org