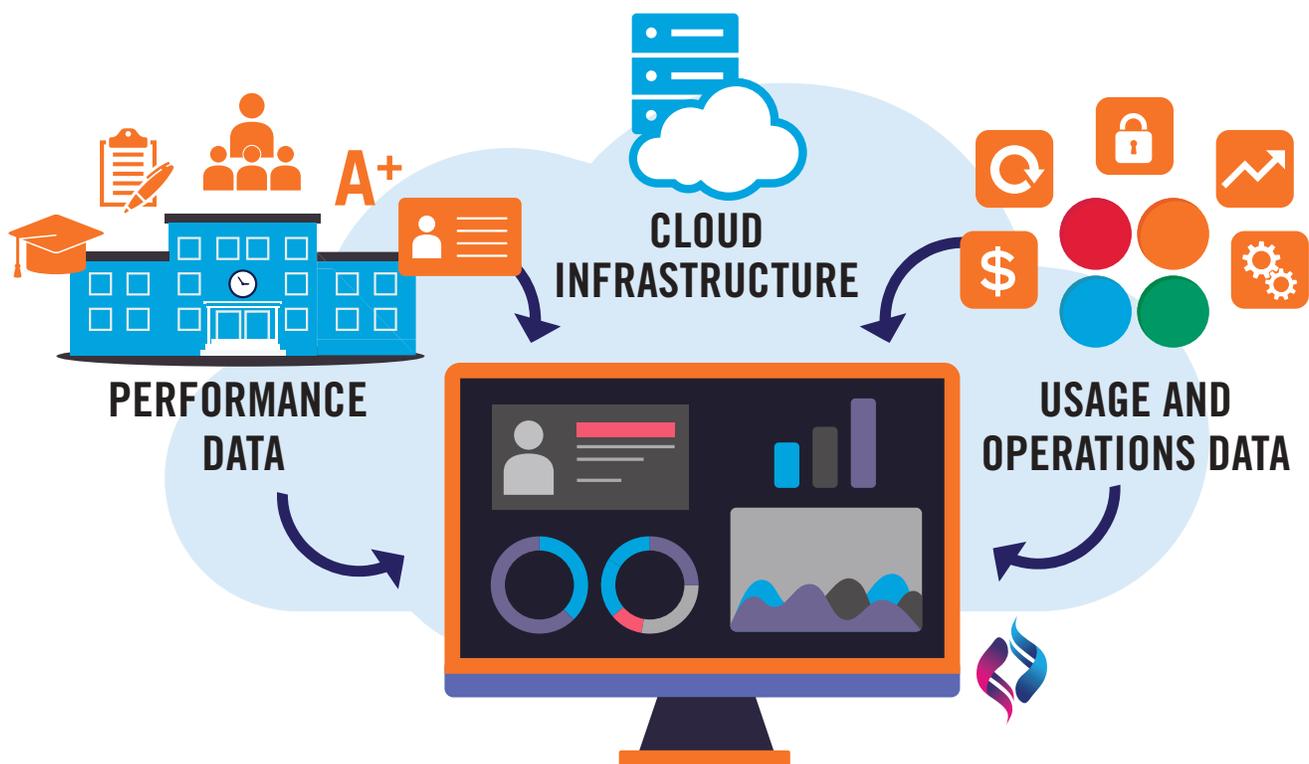# Making On-Demand, Cross-Comparative Data Analysis in Education a Reality

At Florida's School District of Clay County (Clay), Superintendent Addison Davis and the district's technology leaders are in the middle of building a holistic data-informed learning model that will revolutionize how districts view and leverage data to make instructional, fiscal, and operational decisions. Clay is using a hybrid of platforms and tools to funnel multiple data sources—attendance and financial reports, software and app usage analytics, discipline records, test scores, socio-economic information, teacher evaluative forms, and more—into a single dashboard, enabling leaders to quickly see and cross-compare all data points with just the click of a mouse.

Jeremy Bunkley is the director of information services at Clay, and he and his team are the visionaries working behind the scenes to create this comprehensive data analytics ecosystem. "In the current education landscape, there is so much focus around student test scores and results data," says Bunkley. "If a teacher uses a certain program and then students receive a certain range of test scores, there's an assumption made about the effectiveness of that program. But at Clay, that's not enough. We don't want to know just about the results data. We want to know about all the elements surrounding the student that made them either successful or unsuccessful. **Our mission is to remove the assumptive component of analysis.**"

Clay has the data it needs to craft this holistic picture but piecing it all together in a single format that enables district leaders to instantly cross-compare all their data has been nearly impossible until this point.

Turning Raw Data Into Actionable Insights

PERFORMANCE DATA

CLOUD INFRASTRUCTURE

USAGE AND OPERATIONS DATA

Step 1:
Compile software and app usage data from school devices to make informed decisions

Clay has multiple systems in place that provide administrators with a plethora of information, but Bunkley realized that the district was missing one very critical piece of the puzzle—actionable usage data. Like most school systems, Clay has been purchasing and deploying new technologies in the classroom, but they were having a difficult time tracking the efficacy of those investments. The qualitative data showed Clay's students were more engaged in their education, but there wasn't enough quantitative data available to measure return on investment, assess instructional impact, or inform professional development practices.

After researching various solutions, Bunkley discovered CatchOn, an expansive data analytics tool that compiles up-to-the-minute usage data—inside and outside of the classroom—on every school device. Clay deployed the solution in 2018 and quickly began seeing results. "CatchOn enables us to look at the classroom from a different lens because we've always looked at it from just a test results standpoint," says Bunkley. "Now we can see the actions being taken by our students on the technology side, enabling us to form correlations between their usage and their performance results."

> "The biggest question in education is how is technology affecting student achievement. That is a very difficult question to answer, but that's the question every superintendent, CTO, and lawmaker is attempting to answer. CatchOn is one of the ways we are answering that question. Using the tool, we can see our technology and application usage for the first time. That's the power CatchOn brings." —Jeremy Bunkley

Step 2:
Converge and convert all data points into meaningful analysis

Once Clay deployed CatchOn, district leaders wanted to consolidate their data sources—attendance, discipline, test scores, usage, etc.—across all systems to get a holistic view of their learning environments in relation to student performance and well-being. That's when Bunkley discovered Innive.

Innive K12 360 aggregates school district data and transforms it into clear and concise analysis that education leaders can access on-demand via user-friendly, intuitive dashboards. Designed with education leaders in mind, Innive's sleek dashboards enable school districts to monitor critical key performance indicators (KPIs) and other important benchmarks. The solution's actionable insights are tied to resource and intervention recommendations, enabling real-time continued improvement.

"Innive is a game-changer because it's eliminating the need for us to run reports from 40 different systems," says Bunkley. "This solution has enabled us to instantly bring multiple systems together to perform a cross-comparative analysis instead of spending a large quantity of time sorting through documents and spreadsheets to make comparisons."

Step 3:
Migrate to the cloud

ENATrustCompute ℠

Creating a secure and reliable virtualized environment to host this data analytics and aggregation system is the third critical component of Clay's groundbreaking vision. Currently, the district is hosting both Innive and CatchOn on-site, but Bunkley intends to migrate all systems to ENA TrustCompute, ENA's cloud computing solution. "I'm a very big believer in not hosting applications internally," says Bunkley. "I'm very focused on hosted and cloud-based solutions, so while it's currently an internal project, it will ultimately finish as a cloud-based data analytics model that can be packaged and replicated for any district in the state or country."

According to Bunkley, school districts need to consider leveraging the cloud to future-proof themselves. "It comes down to economics," says Bunkley. "Many administrators and technologists think its more expensive to run their applications and systems in the cloud, but we view it differently at Clay. In our current economic climate, it's difficult to find employees with the skillsets required to support today's digitally-advanced school systems. Schools are losing talented individuals to the private sector."
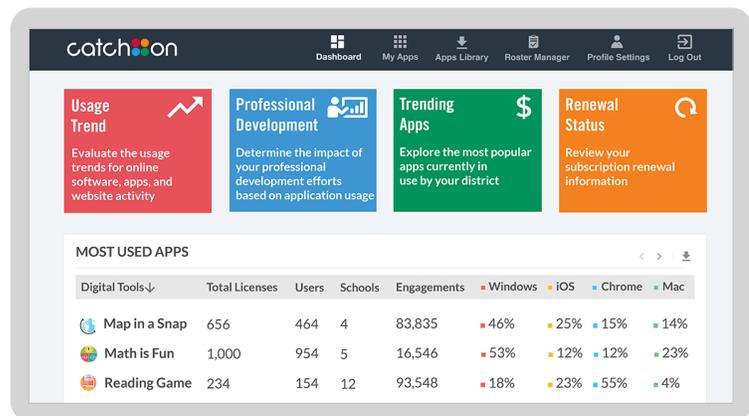
The A-Ha Moments
Though the program is still in its early stages, the a-ha moments are already happening frequently for Bunkley and his team.

CatchOn

Instant ROI

CatchOn has provided Clay's administrators with instant visibility into their students' application usage data, enabling them to assess the effectiveness of their technology investments. "CatchOn has shown a promising return on investment for us," says Bunkley. "After deploying the tool, we quickly discovered that some of the apps we've been paying for aren't being used, so we canceled some of those licenses and subscriptions."

catch∙∙on

Dashboard | My Apps | Apps Library | Roster Manager | Profile Settings | Log Out

Usage Trend — Evaluate the usage trends for online software, apps, and website activity

Professional Development — Determine the impact of your professional development efforts based on application usage

Trending Apps $ — Explore the most popular apps currently in use by your district

Renewal Status — Review your subscription renewal information

MOST USED APPS

Digital Tools↓	Total Licenses	Users	Schools	Engagements	Windows	iOS	Chrome	Mac
Map in a Snap	656	464	4	83,835	46%	25%	15%	14%
Math is Fun	1,000	954	5	16,546	53%	12%	12%	23%
Reading Game	234	154	12	93,548	18%	23%	55%	4%

Informed data chats

The district also intends to use CatchOn to guide its application discovery process. "We are going to run an export of our entire app set through CatchOn and then sit down with our curriculum and instruction team leaders to review

the actionable data," says Bunkley. "We are going determine if the apps being used by our students align with state academic standards, if there are apps teachers shouldn't be using, and what apps, if any, should be blocked."

Additionally, the actionable data will enable district leaders to tap into one of their most valuable assets—teacher voice—to identify those applications being effectively used in the classroom to produce positive outcomes, providing district leaders with the measurable data needed to make more informed decisions regarding their EdTech investments and professional development strategies.

Innive

Data audit

As Clay's technology team began working with Innive to build custom dashboards, it immediately became clear that the district needed to review and update its data. "Our information systems, as they were built, were never meant to be analyzed in the way Innive is doing it," says Bunkley. "This process has been great because it's pointed out some potential data gaps on our end. Seeing the data on a spreadsheet is one thing but being able to visualize it in a dashboard is completely different, and it's really pointing out some inconsistencies in our data, which has been very helpful."

"For example, when we saw our Innive dashboard, we immediately noticed an inconsistency with our demographic information," explains Bunkley. "We did some research, and we discovered that an incorrect code had been manually entered and that our Asian student population was being identified as multi-race. The a-ha moments with Innive have been interesting and unexpected. We fully anticipated that it would show us our data in a way that helps us make decisions. However, it's doing so much more. It's showing us everything we've done wrong so we can get to the point where we can then make important decisions based upon data we trust."

Supporting Students

With its whole child approach to education, Clay is revolutionizing how school districts deliver personalized instruction to students. By cross-comparing all data points, Clay's educators will be able to quickly pinpoint specific areas of need and identify reasons why a child may be struggling.

"Real-time, cross-correlative data will enable us to provide the specific support our students need to excel," says Bunkley. "For example, in the future, I can see us optimizing our scheduling by matching students with teachers based on our comparative analysis. If we have one teacher that shows great gains with students with disciplinary issues and we have another teacher that demonstrates significant progress with non-English speaking students, we can align our students with the teachers who best fit their needs."

The educational visionaries at Clay aren't afraid to push the boundaries and redefine what's possible when it comes to their students. Through the use of actionable data analytics, they are engineering an entirely new education model that will positively impact the lives of countless children for many years to come.

For more information about ENA TrustCompute, visit www.ena.com/trustcompute.
For more information about CatchOn, visit www.catchon.com.
For more information about Innive, visit www.inniveinc.com.