Bellevue School District Effectively Analyzes Student Data with *Pinnacle Analytics* from Excelsior Software

Overview

Bellevue School District is a diverse, growing suburban district outside of Seattle. Enrolling approximately 16,000 students and employing more than 1,000 educators and faculty, BSD strives to monitor and store an enormous amount of student-related information. Throughout the school year, this data is used to direct district decision-makers, develop curriculum, prepare teachers for the classroom and inform parents about the academic lives of their students.

By August 2004, BSD felt that its current system of reporting and analyzing data was no longer efficient, cost-effective nor even feasible in some instances. Having already established a positive relationship with Excelsior Software through its gradebook solution, BSD turned to the company again for a better way to manage information and reporting. Ultimately, BSD desired a data analytics tool that offered fast, accurate results that would lead to better decisions for its students and teachers and help achieve long-term district goals.

Issue

In the four years since the No Child Left Behind act was implemented, states and districts have been working toward a more data-driven instructional environment. On a local level, NCLB has inspired district decision-makers to track data such as grades and student test scores. Unfortunately, the process of storing and analyzing a large amount of data can be cumbersome and overwhelming. Administrators and teachers have been forced to deal with traditional data warehousing systems, which limit the flexibility of data, require hefty financial investments, and in some cases, necessitate resource-intensive manual analysis. Before data-driven instruction can occur, local administrators needed to build an accurate data infrastructure, incorporate the proper tools for analysis, and train educators to utilize the data results in their classroom practices.

BSD, like many districts nationwide, struggled with its previous, traditional data reporting solution. Specifically, its reporting system required extensive training and a great deal of time to create new cubes for reporting particular queries. This meant if an educator had a question (for example, how well ELL students in a particular class performed in previous years), the process began with the educator bringing the question to the principal. The principal would then put in a request to the district's data-reporting team. The request would be prioritized and eventually a report would be issued and analyzed. Depending upon the request, the educator who posed the question may not have received an answer for days, weeks or months. At Bellevue, where the district superintendent, Dr. Michael Riley, is known for being data-focused, this traditional reporting model was no longer suitable.

BSD officials were eager for a system that would allow them to quickly and efficiently answer questions about its students and provide that information to educators and administrators to make better-informed decisions. "We wanted an application that would allow our teachers to spend less time assessing new classes each year and spend more time teaching," explains Nancy Larson, Manager of Facilities, Maintenance and Information Technology for BSD. "Our educators should have the information they need available at their fingertips."

Solution

With its history of a solid, good-standing relationship with Excelsior through the use of the company's electronic Pinnacle gradebook, BSD felt comfortable when *Pinnacle Analytics* (formerly District Data Analyzer) was brought to the table. "We decided to move forward with implementing Excelsior Software's *Pinnacle Analytics* based on our established relationship, the solution's attractive pricing and because we saw a great deal of potential in the product," explains Chris Lindberg, Data, Research & Testing Manager for BSD. "The technology appeared to be a versatile, intuitive tool for data analysis."

Not only would *Pinnacle Analytics* be a complementary application to the Pinnacle System, but it would also be used to gather information from any additional open database connectivity (ODBC) compliant data-source. For BSD, that meant that the *Pinnacle Analytics* would be able to access eight years' worth of information stored in the district's student information system (SIS), and there would be no need to transfer data.

Excelsior's new tool would be able to manage and analyze its information without the cumbersome limitation of traditional data solutions. Through a state-of-the-art technology called Data Cloud™, *Pinnacle Analytics* allows multiple users to simultaneously connect to multiple data sources in their native file formats that may reside in different locations on varied platforms. For BSD, this meant that data collected since 1998—including enrollment data, demographics, course and grade information, state-level assessments (AP, IB, PSAT, etc.), attendance, discipline, special program participation information, etc.—would be available for any user to point-and-click their way through the data from either a desktop or browser environment. BSD would be able to parse immediately through data without limits, with a margin for computation error near zero.

Pinnacle Analytics also enables users to work with millions of records and still respond to queries quickly through its patented technology, Associated Query Logic™ (AQL). Dr. Riley uses *Pinnacle Analytics* to mine for issues such as how many of BSD's minority students, free/reduced lunch recipients, and ELL students are enrolling in advanced classes; how many students with low standardized test scores have been in our school system three or more years; how many students who take a math support class in sixth grade reach calculus by twelfth grade; and so on. In the past, these types of questions would have taken me weeks to answer and would tie up a number of staff charged with conducting the research. Now, whatever question crosses my mind can be answered within minutes," explains Riley.

Because of AQL™, the district's administrators realized they would never have to worry about exceeding their hardware capabilities, as the product is a RAM resident application—the tool runs online using minimal bandwidth or offline on a laptop. "We believed *Pinnacle Analytics* would be a flexible tool and most importantly, unstructured," Lindberg continues. "We could bring a wealth of information to more people across the district because extensive training is unnecessary—questions can be answered quickly and without difficulty."

Results

For the 2005-2006 school year, BSD implemented *Pinnacle Analytics* district-wide, with the goal of making student data available to all its educators and administrators. With the ability to easily run reports with information dating back to 1998, BSD found it was possible to offer answers to a nearly unlimited amount of questions faster than ever before.

Throughout the year, BSD trained over 100 educators on how to best use *Pinnacle Analytics*. "We feel that word of mouth is our best tool," explains Larson. "It begins with good leaders making wise technology choices and showing the possibilities of those solutions to district educators and faculty. From there, people talk to each other and usage increases."

In addition to providing nearly instantaneous access to student information, BSD administrators praised Excelsior Software's exceptional customer service practices. "Our Excelsior contacts work diligently to provide training, answer questions and most importantly, ask questions," explains Jack McLeod, Director of Facilities and Information Technology for BSD. "Excelsior has always been willing to incorporate our feedback and specific district needs into *Pinnacle Analytics*."

Currently, Excelsior and BSD are working to create additional functions within *Pinnacle Analytics* that offer teachers and administrators more ways to access data, including a drop-down menu with commonly used and customized reports.

"Prior to implementing *Pinnacle Analytics*, we would spend so much time compiling reports and manually assessing data," Lindberg concludes. "With *Pinnacle Analytics*, we can look at our data from multiple perspectives as if through a camera lens. We can zoom in to analyze a particular student, or zoom out for a broader view of the class, school or district. Ultimately, Excelsior has provided us with the best tool to bring us closer to a truly data-driven instructional environment."