INTRODUCTION:

THE ALLURE OF DATA.

At the end of every summer in schools across the country, a familiar scene is repeated: a beginning teacher enters the classroom in the last weeks of August to prepare for the upcoming school year. The promise and excitement of a new year and a flourishing career hang in the air. Amidst the chaos of lesson plans and resources strewn about the classroom, the principal enters and embarks on an explanation of the district’s expectations for the newest member of its teaching core. The lone statement that cuts through the clutter and is committed to the new teacher’s memory is “We’re a school district that uses data to drive instruction.”

That very statement could just as easily be uttered by any of the administrators in my district today, or by my first administrator back in 1988. We may have refined the statement, and added adjectives like “personalized instruction” over the years, but the essence of the statement hasn’t changed. The allure and elusiveness of that very statement has driven me for the last 26 years; since it became part of our lexicon, its promise has captivated my district and countless others across the country. The simplicity of the statement’s purpose (and the complexity of its implementation) allows it to remain an integral element of almost every school district’s vision since the early 1990s.
THE CHALLENGE: DECADES-OLD PROBLEM.

The challenge of collecting, accessing and analyzing the right data in sophisticated ways has plagued educators for decades. My district has wrestled with this issue my entire career. The promise of using data to inform educational decisions has always been tantalizingly close, and yet always seems to be just beyond our grasp. As a new teacher I immediately understood the importance of using data in virtually every decision I made in my classroom, in both figurative and literal terms. Each evening I dutifully carried home at least two 10-pound canvas bags stuffed with journals, reading response logs and the rest of my students’ work generated during a busy school day. The avalanche of data was almost suffocating, yet its allure and promise pushed me to try to tame the beast. I often worked deep into the night trying to make sense of the data I was collecting and recording in my grade book. As personal computers became more accessible to educators, I turned to spreadsheets to help analyze the mountains of data I collected every day. While I made some inroads, every question I answered about my students generated more questions: Did these students have the same performance results last year, or even earlier in their educational career? Was there a connection between their performance and their attendance? How many came from a disadvantaged socioeconomic status, or were ever referred for special education services? I also thought about deeper questions that required a more sophisticated analysis of who these students were as readers, writers, scientists and social scientists.

My vast array of spreadsheets was piling up, and yet was not connected to any of those data points. Frequently, I had to look elsewhere to get the answers to those questions, which was time consuming, and I had to be sure that I was asking the right questions. Not an easy task for a new teacher still trying to figure out what questions to ask.

Luckily, our district was an early adopter of student information systems. In the early 1990s, data systems were much different than the comprehensive system we use in our district today. Early data systems only allowed access for building secretaries and a data manager at the high school, and the data collected was self contained on an individual's computer and therefore disconnected from everyone else’s data. Accessing a student’s attendance or discipline record required a walk to the office, where the secretary would provide the information. If you needed information concerning a student's reading performance, you had to track down the reading specialist, request the information and sift through a three-inch thick file folder. Although we had rich data sets, they were in disparate systems (both digital and analog), and difficult to access. It sounds archaic compared to what is available to school districts today, but I would argue that there are many school districts still operating this way. On its face value the statement sounds ludicrous, but in many ways it is true. Districts have data systems that sit securely in the cloud with 24/7/365 access by everyone in the district, but are they able to put this data to its full use?

Your district may refer to itself as ‘data-driven’ but is all curriculum and instruction informed by the data you’ve collected? Good data and the targeted use of it allows for true personalized instruction for all students.
THE SOLUTION: FOLLETT ASPEN™ INSTRUCTIONAL MANAGEMENT SYSTEM.

If we peel away the essence of my statement we can see that many districts have processes that yield the same data-poor results. School systems collect data in multiple data applications and attempt to bring the data into some type of dashboard for easy analysis from different systems. This arduous task usually offers imperfect results. Simply stated, more systems equal more complexity, resulting in a more difficult time accessing and analyzing the data. In fact, it could be argued that having multiple data systems mirrors the archaic process of tracking down the secretary to ask questions about a student’s attendance. In the early 1990’s, we had multiple applications collecting separate sets of data. A simple question resulted in a convoluted, inefficient and often more expensive procedure to provide the answer. Today, the West Warwick Public Schools is one step closer to solving this issue, because we use Aspen Instructional Management System (IMS).

Using multiple data systems in today’s environment creates the same challenges our district faced over twenty years ago. It’s difficult to access and analyze data collected in multiple systems, and school districts need additional tools to help them access the data. Districts need to employ SIF Zones, data warehouses and data dashboards for multiple data systems to work effectively. This additional layer of technology often means additional human resources and hardware resources, and more sophisticated skill sets that few school districts readily possess. In these situations, school personnel must understand what questions to ask while they’re designing tools to integrate these disparate systems. At West Warwick, we eliminate a lot of the extra cost and complexity with Aspen as our solution.

EXAMPLES: HOW ONE DISTRICT USES FOLLETT ASPEN™

The West Warwick Public Schools integrates thousands of data points into a comprehensive IMS, giving educators and district leaders the opportunity to analyze the data slice by slice from various perspectives. Aspen is used to collect and analyze staff and student data in the following tables: attendance, discipline, scheduling, health, special education, personnel, assessment, curriculum mapping, group pages, traditional grade books, standards-based grade books, teacher evaluation, staff attendance and professional development. Our analysis is limited only by our imaginations and not by our technical ability to link disparate data applications. Aspen is the solution that allows an economically distressed school system to stretch every dollar. Resources are scarce, and we often ask ourselves if we’re putting the right resources in the right places. Our data analysis helps us answer those important questions. Aspen helps us answer any question we have about the effectiveness of our professional development, the implementation of our new common core curricula or a thousand other questions that crop up in the day-to-day business of running a school.

After 26 years I can finally say we use integrated data sets to make informed decisions about our students and our staff based on multiple measures.
With Aspen, district leaders can go as far as reviewing the curriculum units for quality and comprehensiveness, and in the future we’ll be able to review student performance in courses across the district to measure student achievement against the assignments aligned to the curriculum documents.

This partial list illustrates the types of data we analyze using Aspen:

- Professional Development (PD) activities in which our teachers engage during professional development days
- Funding sources that support our PD activities
- Units of study developed by our teachers and their alignment to Common Core State Standards
- Locally created assessments, transcript data, and standardized assessments
- Student discipline data and how it connects to student engagement and instructional environment
- Educator evaluation data and evidence associated with the educator

Professional development is an important aspect of what we do to support students and their teachers. We must be able to analyze our professional development activities and the potential impact they have on student achievement. Trying to answer the question is difficult enough – having data spread across multiple data tools makes it nearly impossible. Aspen provides our educators and administrators the tools for quick and thoughtful analysis and reflection.

In May 2013, district leadership at West Warwick discussed the need to build units of study into our curriculum maps that align with the Common Core State Standards and the Next Generation Science Standards. It is vital to quickly assess whether or not we’ve met our goals or if we’re trending in the right direction. Illustration 1 captures the analysis using Follett Aspen™ Quick Charts to review our PD activities. The chart shows that more than 52% of our PD activities involved building curriculum and units of study, and shows where we’re putting our time and energy. This information comports with the goals created by district and school leaders for the 2013–2014 school year.
With our curriculum data housed in the same data system, we can probe deeper and review who was involved in which activities, and individual time committed to the activities. With Aspen, we will soon be able to target specific students and review a specific standard or set of standards through the lens of that student’s performance over their tenure in our district. We spend more than $100,000 federal, state and local funds each year to support professional development of our educators. It is essential we can gauge the effectiveness and efficacy of how we’ve spent those funds. Our students and our community are counting on us to be able to make the right decisions.

Aspen also allows us to dig deeper because we house the data in one comprehensive system. In addition to being able to ensure that we’re in fact spending our resources where we intended, we can also see what we’re spending our dollars on throughout the school year. District and school leaders can review the hundreds of units of study by reviewing our curriculum maps in Aspen. We can review maps for quality, aligned standards, resources and instructional design. Professional Development staff can assist teachers with any areas that need further development. We can also see where we have teacher created resources or purchased resources to support instruction. Leaders can also make decisions about where we need additional resources. Aspen assists teacher leaders in the often difficult task of analyzing the standards aligned to a Unit of Study.

Illustration 2 depicts the standards found in a fifth-grade curriculum map and its unit of study, “The Beginnings of Human Society.” In the 30-day unit students are asked to connect the past and the present as they behave as historians. This is the most important aspect of the 30-day unit and represented in the graph in illustration 2.
Once we start asking questions about PD activities and the development of units of study it’s natural to dig deeper. To get a more complete answer to our questions around curriculum maps, we’ll want to actually review these maps. Educators in WWPS can review the curriculum map depicted in Illustration 3. Educators can view the map, the standards, the resources used by the teachers and the resources used by the students. We can also view which standards keep showing up throughout the unit, and therefore represent major work in the discipline. Educators can view student assignments in their grade books and analyze their students’ performance. District and school leaders have the ability to review assignments and how students fared in a grade level by school or across the district. Aspen provides the opportunity to keep digging until our questions around student performance are answered. The connection between curriculum, professional development, students and educators brings us closer to making data-informed decisions down to individual students and educators in the West Warwick Public Schools. The tools found within Aspen assist the entire learning community as we move beyond the development stage in our curriculum work to execution in the classroom. Our teachers, students, parents and administrators have access to curriculum maps, the resources used during instruction and evidence of a student’s performance.

This work can only be accomplished because all of the data is housed in one place that is readily available for analysis.

After 26 years I can honestly say our district effectively uses data to inform the decisions we make concerning our students and the adults that serve them in our community. The richness and complexity of performance from our students and staff can only be told because we house all of their educational stories in Aspen. I’m hooked. I never want to go back to disparate data systems again.